

Catholic Digest

AUGUST 1951

25¢



**May We Use the
A-bomb First?**
PAGE 1

CONTENTS

May We Use the A-Bomb First?	"Total Empire"	1
When Junior Goes on a Hunger Strike	Everywoman's	6
The True Valentino Story	Central California Register	10
30,000 Little Big-Leaguers	American Magazine	12
First Jet Ace	Air Force	17
A Protestant Looks at the Schools	"God in Education"	21
Mary Is a Grand Old Name	Queen of All Hearts	26
Salt May Save You	J. D. Ratchiff	28
Salt May Kill You	Tomorrow	30
War Photos—Crimea to Korea	Picture Story	33
Wait to Marry Your GI	† William O. Brady	41
Revolt Cells at Work in Russia	American Federationist	44
The Cloisters in New York City	Catholic World	46
Can the Salmon Survive?	Eagle	50
You and Your Job	"Six Ways to Get a Job"	53
Waltz by Strauss	"Three-Quarter Time"	56
How to Find Oil	"Oil for the World"	59
Don't Duck Jury Duty	Changing Times	63
Let Your Wife Pay the Bills	McCall's	67
I Go A Whaling	Ships and Sailing	70
The Fights of Bishop Sheil	Progressive	75
Gathering of the Clans	United Nations World	81
The Crucifix Fish	"The Living Tide"	84
You Can Be Popular	"It's All in Your Mind"	87
The Building of Westminster Abbey	"In Search of London"	90
Fiesta of Stars	Picture Story	97
How We Split the Atom	"It's Your Atomic Age"	105
Playmates	Picture Story	125
Flights of Fancy, 20 This Struck Me, 32 Open Door-Open Exit, 42		
Books of Current Interest, 103		

Braille edition: National Braille Press, 88 St. Stephen St., Boston, 15. \$10 per year.

British and Irish edition: National Press, 16 So. Frederick Street, Dublin, Ireland.

French edition: 9, rue du Petit-Pont, Paris V^o, France. *Digeste Catholique*.

Japanese edition: Catholic Digest, 20 Honchio-cho, Shinjuku, Tokyo, Japan. *カトリックダイジェスト*

Subscriptions to all foreign editions for your friends abroad or yourself are \$3 per year, and should be sent to the addresses given above, not to the St. Paul office.

Dutch edition: Tiensestraat, 13, Leuven, Belgium. *Katholieke Digest*.

German edition: 39 Herstattstrasse, Aschaffenburg, Germany. *Katholischer Digest*.

Italian edition: Via S. Antonio N. 5, Milano, Italy. *Sintesi dal Catholic Digest*.

Published monthly. Subscription price, \$3 the year; 2 years for \$5; 3 years for \$7.50; 4 years for \$10. Same rates for two or more yearly subscriptions, which may include your own. Editor: Paul Bussard, Managing Editor: Louis A. Gales, Assistant Editors: Kenneth Ryan, Edward A. Harrigan, Harold J. O'Loughlin, Joseph E. Abernold, Harry W. Flannery. Art: Kern Pederson. New York office: 270 Park Ave., New York 17, N.Y. Associate Editor: Jeanne Dixon; Book Editor: Francis B. Thornton. Entered as second-class matter, November 11th, 1936, at the post office at St. Paul, Minn., under Act of March 3rd, 1879. Copyright 1951 by The Catholic Digest, Inc., 41 E. 8th St., St. Paul 2, Minnesota



Catholic Digest

REG. U. S. PAT. OFF.

VOLUME 15

AUGUST, 1951

NUMBER 10

Permanent Good in the Passing World

May We Use The A-Bomb First?

We may. If we don't, we might not use it second

By EDMUND A. WALSH, S. J.

Condensed from a book*

I PERSONALLY see no immorality, though I do see much tragedy and horror, in the U. S. government using the atomic bomb first against an aggressor.

If the attack on us is certain and immediate we have a right to stop it. Primitive man had bare fists or stones lifted against him. In the course of time man faced axes, swords and arrows. The danger, though moving back in space, was still immediate and certain in time. With the invention of gunpowder, the assailant could move farther away; but his attack was no less certain and immediate.

Now comes the age of air power, with military aviation able to carry

flaming death from bases 5,000 miles away. Aircraft carriers far out at sea, flying bombs, guided missiles, jet bombs, and atomic explosives can now be a certain and immediate menace from ever-growing distances. The right of self-defense remains.

The natural law confers the right to use force for legitimate self-defense. The force must be in proportion to the nature of the attack. The right belongs not only to individuals but to the state. Moreover, governments have a duty to safeguard the lives, liberty, and temporal welfare of citizens. In total war, the attack is leveled against whole peoples as peoples.

*Total Empire. Copyright 1951 by the Bruce Publishing Co., Milwaukee, Wis. Reprinted with permission. 293 pp. \$3.50.

This is the condensation of a chapter, "Atom Bombs and the Christian Conscience," from the book Total Empire (Bruce, \$3.50), by Edmund A. Walsh, S.J. The chapter is but one aspect of the broad subject discussed by Father Walsh in his incisive interpretation of the "roots and progress of world communism" which is contained in his book.

Father Walsh is a renowned authority on international affairs. He is the vice president of Georgetown university and regent and founder of its Foreign Service school. He draws on years of study of communist tactics in world affairs. He debunks the popular notion that Russia is a "riddle wrapped in a mystery inside an enigma."

In appraising the Russian revolution, Dr. Walsh sets it in its proper focus as "the most important single political event in history since the fall of the Roman Empire." He shows that the reds have only one aim, complete world domination. He also makes a searching analysis of the meaning of dialectical materialism as the norm of Soviet foreign policy.

Dr. Walsh's book is considered one of the most significant and timely volumes yet published in this crucial period of world history. It is a must for understanding the why's behind communist actions.

Now, a rocket bombardment of the U.S. could come from an inland Russian base such as the area stretching from Lake Baikal to Kamchatka in Siberia. It could come from launching platforms in the Baltic regions. Turn to the Orient on a globe. Measure the air distance from Soviet bases such as Anadyr to the heart of North America. We are no longer safe behind wide expanses of water. We are exposed on both flanks, and over the top of the world, to air assault. A 5,000-mile rocket range brings the entire U.S. under air bombardment.

The effective range of V-2 rockets was relatively short when the

nazis bombarded London with them. But nazi technicians were improving rocket warfare rapidly. America would have been the next target. In his report of 1945, General Marshall points out, "Göring said after his capture that it was certain the eastern American cities would have been under rocket bombardment had Germany remained undefeated for two more years. The first attack would have started much sooner." We must not underestimate the progress Soviet science has made from the point where the nazis ended.

What Soviet Russia has accomplished with the schnörkel submarine, taken over from defeated Germany, is a fair index of what she could do with the rocket program she got at the same time. Our first warning might be the appearance of a cloud of unidentified missiles suddenly appearing on our radar screens. The missiles would approach North America at incredible speed. At the Long Range Proving ground, Cocoa, Fla., a captured V-2 rocket was tested July 29, 1950. It flew 2,727 mph, and nine miles high. At that point, part of it detached itself automatically, and continued eastward over the Atlantic at 3,600 mph.

Before Pearl Harbor, we knew that a Japanese fleet of combat vessels and troopships was steaming southward in the Pacific, presumably toward Indo-China. We thought that the first blow would

be struck in that area. Meanwhile, the true menace was creeping nearer and nearer to Pearl Harbor in the North Pacific. History may repeat itself and produce a Soviet feint in some remote area of Asia or the Middle East. When it comes we should keep our eyes fixed on the Northwest and Arctic sector of our American defense system. If the U.S. government has sound reason to believe (that is, has moral certitude) that an attack is being mounted against this country from any source, the President would be morally justified in taking measures proportionate to the danger. That means the atomic bomb. No power would launch a surprise attack on the U.S. without an adequate supply of atomic bombs. There is practically no chance that the aggressor against us would be so outclassed that we would be morally wrong in using our best weapons. An attack mounted against us

would be planned to be sudden, unannounced, and devastating enough to cripple our powers of reprisal, for our reply to any partial crippling would be overwhelming. But before we could morally strike first we would have to have accurate, honest, competent information, from an alert intelligence service.

If time allowed, a warning or an ultimatum to an enemy found to be preparing such an attack should be given. But we do not have to await the first blow from a power that has no moral inhibitions. An appalling responsibility is now laid on military intelligence, on diplomatic vigilance, and on all related security agencies. Our measures of certitude must be as high and firm as is humanly possible.

A perplexing problem yet remains. Would our argument apply to another country about to be attacked by Soviet Russia? The developments in Korea should make



116 Years Ago

TODAY there are two great peoples who, starting from different points, seem to approach the same destiny. They are the Russians and the Americans. While men were looking the other way, they suddenly reached the first rank of nations.

All other peoples seem to have nearly reached the limits of their potentialities, and to have nothing left to do but to maintain their present status. But these two peoples are growing; all others have stopped or progress only with the greatest effort; these alone follow with ease and celerity a course whose limit the eye cannot yet detect.

To attain his ends, the American relies upon personal interest and allows free scope to the unguided energy and common sense of individuals. The Russian somehow concentrates the power of society in one man. The method of the former is freedom of the latter, servitude.

Alexis de Toqueville in *Democracy in America*, 1835.

apparent to us something that probably we have not yet fully realized. We are committed to a new and collective responsibility. If we are morally justified in using the atomic bomb for our own defense, we can also use it to guarantee the security of UN members in com-

mon danger with us.

Consequently, use of the atomic bomb against a nation named as aggressor by the UN, even though the invasion be not immediately directed against the U.S., would not violate Christian morality. Defense of allies was included by theologians among the legitimate reasons for armed intervention long before Grotius codified the law of nations.

What if a nonmember of the UN should be attacked? What of Ireland, Spain, Austria, Germany, and Japan? The answer in respect to Austria, Germany, and Japan is obvious because of our responsibilities in those zones. The answer is just as clear for the others. The defense of human freedom does not rest on legal grounds only. It rests also on understanding of the issue and the challenge. Every new conquest by the Kremlin is an added menace to Christian civilization, and to the Hindu and Moslem worlds as well. That is the issue which must be met, at least if life on this planet is to be worth the living.

The cost of preventing future wars will indeed be staggering, but we must weigh the alternatives. The real price of a needed commodity is fixed by the foreseeable consequences if it is not bought. A fire extinguisher for a modest home may seem expensive in terms of present income; it can be immeasurably more expensive, possibly fatal, not to have it on hand

and in working condition when a fire breaks out.

A fire is aflame in the world today. It is kindled and fanned by a band of international arsonists. The revolution is on the march from Berlin to Korea. Eight nations have had their freedom burned to ashes already. The final confrontation now has come, and American blood has been shed in a major war. The two central figures, whose emergence Stalin predicted, are committed to combat in the Far East while their diplomats sit facing each other across conference tables.

The unprecedented character and stark realism of the conflict became evident a year ago. The President of the U.S. could bluntly declare then that he could no longer put faith or credence in any promise made by Soviet Russia. In normal times, a statement like that from the head of a government would

have meant instant rupture of diplomatic relations. It would probably also have meant full mobilization for war on both sides. But we are not engaged in conventional diplomacy.

We are now dealing ourselves into a kind of cosmic poker game for the highest stakes in history. Some think that Stalin has been prolonging a colossal bluff. That bluff began at Yalta and Teheran and succeeded notably against Roosevelt, who was then in failing health. The government of the U.S. finally decided to call for a showdown on the Korean crisis, and was supported by the UN. Had the showdown been called for earlier, the odds in favor of true peace in Europe and Asia would have been far more favorable. Soviet Russia would not have scored the gains that began with the desertion of Poland by her former allies.



Mile Stones



DRIVE carefully, don't insist on your rites.

One hundred and sixty-seven people died here of gas last year: 11 inhaled, nine put a lighted match to it, 147 stepped on it.

A train takes 14 seconds to pass this crossing—whether your car is on it or not. The Greater New York Safety Council in the *New York Times* (13 May '51).



The three great menaces to driving in America today: Hic, hike, and hug.
The American Eagle (May '51).

When Junior Goes on a Hunger Strike

*Don't worry too much about his appetite;
there is an easy cure for most cases*

By SIDNEY MARGOLIUS

Condensed from *Everywoman's**



THE LITTLE BOY next door has anorexia, and his mother is very upset about it. If you took a kitchen-door census of the child population on our block, you'd probably find a good half or more of the preschool youngsters have it. But don't be alarmed. Anorexia is simply the medical term for lack of appetite. It is common only in the U.S. Abroad, where food is precious, there's very little commotion about lack of appetite.

To get the facts about this flourishing modern problem, I consulted practicing pediatricians, medical professors, learned medical tomes, and parents themselves. This is what the child experts have found.

1. Occasionally there may be genuine physical reasons for a loss of appetite. But more often, at least at the start, it's based on parents' exaggerated notions of how much children should eat. 2. Because the parents show their concern or even try to force feeding, the problem increases. 3. The cure is largely one of solving the emotional problems involved. 4. Height-and-weight charts lead mothers to worry too

much about their children's eating.

Actually, says Dr. Reuel A. Benson, professor of pediatrics at New York Medical college, nearly every youngster brought to him with a story of poor eating is well up to standard weight and height. Actually, too, he says, a real physical reason for lack of appetite is rare. Generally it's a case of overanxiety on the part of the mother.

Dr. Benson tells of one well-to-do family which sent out an SOS because its youngest boy was on a hunger strike. When Dr. Benson arrived at the family's apartment house, the elevator wasn't working. He had to go up the service lift and through the kitchen. The entire family, including grandparents, was in the living room. The child was in glowing health, and Dr. Benson sought to reassure all concerned. On his way out through the kitchen, the family cook snagged his sleeve. She whispered to him, "Don't you worry about the boy. When the family isn't around, he comes out to the icebox and eats plenty."

Obviously, children like this boy

have good appetites, but won't relinquish the attention they get with a wan refusal of food at mealtimes. Children learn early that not eating will bring a reaction from a parent. Even if the reaction is an angry one, the child still has the center of the stage. And generally a child who has made up his mind not to eat is more than a match in strategy for any parent.

Dr. Lenson has found that poor eaters are often the very intelligent, hypersensitive children, "the smart ones with one ear always cocked in the direction of what's going on." But families of such children are invariably convinced that something is seriously wrong. Usually they ask for a tonic to arouse the child's appetite.

There isn't any, Dr. Benson replies. If the child is near his proper weight; if he's gaining, even a little at a time; and if he shows the other signs of adequate nourishment, he possibly doesn't need as much food as his mother thinks he does. Children vary in their needs.

Food alone does not determine a child's growth. The size of the child's forbears plays a part, too. Serious undernourishment over a long period will stunt a child, but doctors doubt that overnourishment necessarily makes him any taller. Because one child grows faster than another at a certain period doesn't mean he'll be bigger in the long run.

As long as he has water, a child can actually go without food for several days, and some do, without serious injury. It is not desirable of course, but Dr. Benson reports he has yet to see an actual instance of starvation among all the cases of anorexia sent to him for consultation.

It is at the end of baby's first year that parents often become particularly alarmed. The child starts to eat less, when by all parental logic he ought to consume more, since he's bigger.

He also begins to lose that chubby infant look. That frightens mom to death. A baby naturally eats more his first year than his second,

Dr. Benson points out. He gains at least 14 pounds those initial months, and only five or six his second year.

When parents bring in a child who hasn't been eating, a pediatrician will first examine him to make sure there's no genuine indisposition, like tonsilitis, that may discourage eating. He also makes sure the hunger strike hasn't actually injured the child. If he suspects anemia, he'll take a blood count; anemia is not only a result of inadequate nutrition but also a cause.

When lack of appetite actually has a physical basis, it will generally be accompanied by loss of weight, consistent failure to gain,

Children need love — especially when they do not deserve it.

H. S. Hulbert quoted by Harold Helfer.

How Tall Will Your Child Be?

THERE is a pretty sure way of knowing, when your child is only three, how tall he will be at maturity.

The fastest physical development of a child occurs right after birth. During its first year it grows nearly eight inches. Rate of growth gradually diminishes for four years thereafter. After the fifth year, growth becomes very regular and averages about two inches a year. At 16, man's growth slows up and he will gain one inch and a half or so in the following two years. Between the ages of 18 and 20, his growth is an inch at most. When he reaches 25, the ordinary, healthy man has stopped growing entirely. He will be just twice as tall as he was at three years.

Emil Hug.

fatigue, lack-luster eyes, general listlessness, pallor or droopy posture. Actually, however, such symptoms of genuine malnutrition are more frequent among older children, whose nutritional needs worry parents less, than among the little ones.

One clue to whether there's a physical reason for lack of appetite is suggested by Ruth and Harry Bakwin, a famous husband-and-wife team of pediatricians. The Bakwins observed that where lack of appetite is due to genuine physical illness, it appears on the scene

suddenly and is general. A youngster who previously ate well now shies away from all or most foods. In what the Bakwins call psychogenic anorexia, the physical status of the child is usually good while his appetite is capricious and variable. He may eat a certain food one day, wave it away the next.

If no physical causes or effects are discovered, then the job is to reassure mother. Once her anxiety is calmed, three-quarters of the cure is in hand. She stops fussing at mealtimes; when the child dawdles overlong, she simply removes the rest of the meal with a blank expression. The child becomes an actor without an audience.

One woman, whose neighbor's child has been rejecting food, came up with a quick cure. She asked if she might bring her own lad to eat with the hunger striker. Her boy not only ate his own food but went after the other child's, too. When the noneater saw someone else raiding his plate, he started eating fast. Col. Harvey Allen, who heads the New York City school-lunch program, reports that children often eat things at school they absolutely reject at home.

Give a child *some* choice of foods. If he won't eat one item, there are probably a dozen others that will give him equivalent nourishment. Regularity of meals gives children a feeling of security. But sometimes mothers are *too* rigid on this point. A child may not be as

hungry at noon today as he was yesterday. Another common trouble-making habit is that of loading too much food on a child's plate.

Here are some of the questions parents often ask about anorexia, with the comments of pediatricians. But remember, these are the minor problems. The real block is most generally an emotional one.

Does fatigue interfere with eating? Sometimes, more often among older children, appetite is at a low ebb after hard play. It's best to let a child quiet down before attempting to feed him.

What effect do snacks have on regular meals? They may not be a decisive factor in creating anorexia, but they certainly don't help solve the problem. It's particularly important when children have been refusing food at mealtimes to refuse between-meal snacks.

What about introducing new foods? Recommended policies are to try a little at a time, letting the child get acquainted slowly with texture, taste, and smell. It's also wise to introduce a new food at the beginning of a meal.

Is the way food is cooked im-

portant? Foods cooked too long and in too much water may deprive a child of more nourishment than undereating. A child needs foods prepared simply, with few spices or condiments, and cooked so that vital vitamins and minerals are not simmered or soaked away.

Is the child's comfort a factor? Sometimes a child who has made the transition from highchair to table may be uncomfortable with his legs dangling. A stool under his feet will help eliminate that annoying restlessness.

Dr. Benson offers a helpful tip on how to feed the very young child. Most mothers feed from the front, which forces the child to lean forward and bump himself against the spoon. The doctor advises sitting beside the child and offering the spoon from the side.

Does a child need company at meals? Anyone likes company at meals, Dr. Jenkins points out; but if there's no other youngster to eat with the child, it's no crime to let him have a toy for company. It's important to soft-pedal the fussing and cajolery, but mealtime should be a happy time.

Oh, no?

AN aviator sent \$25 to the Holy Father's missions with the remark: "Spending so much time in the air, this money is no earthly good."

✱ Fulton J. Sheen, national director of the Society for the Propagation of the Faith.

The actual deathbed drama was better "theater" than the celluloid version

The True Valentino Story

By T. M. LEBERTHON

Condensed from the *Central California Register**

WENT to see *The Valentino Story* in a Fresno movie theater. I was curious because I had met and talked with Rudolph Valentino years ago, and covered his death in New York a quarter of a century ago for the *Brooklyn Times*, long since absorbed by the *Brooklyn Eagle*. Mainly I wanted to see how the Columbia movie handled the death scene, which I had described, and which all the newspapers of the nation had described, back in 1926.

Along with at least a score of other reporters, photographers, and newsreel cameramen, I had waited for Valentino to die. The press, in shifts, had waited three days in an anteroom of the Polyclinic hospital, on 51st St. off 8th Ave. in Manhattan. I can still see Producer Joseph M. Schenck bursting into the room, tears streaming down his heavy features, his hands lifted in a gesture of grief and loss. I can still almost hear him sputter brokenly, "He's dead."

We of the press rushed to telephones to call our

papers. It was one of the great front-page stories of 1926. His death, which came about a year before the advent of sound, ate up more newsprint than that of any internationally known statesman of the period.

Rudolph Valentino, dead at the age of 31, although apparently in blazingly good health a week before, had been the outstanding favorite of women audiences in the screen's silent era. He had invariably been referred to as "the screen's greatest lover." He had ushered in a new type of screen star, the ardent, impetuous Latin. Those drowsy, slow-burning eyes, the swart and sensitive and classically regular features, his hair black and shining as raven's wings, and his panther-like grace, had made Valentino a box-office gold mine in "the fabulous 20's."

And so, in Fresno, 25 years and 3,300 miles from the scene and moment of Rudolph Valentino's death, I went to *The Valentino Story*.

In the movie, Valentino is shown as a handsome, intrepid careerist



who had never married. He is shown dying while a married woman with whom he is in love holds his hand. In his short life, Valentino was married and divorced twice. His second wife was the wealthy Winifred Hudnut of the famous facial-cream family, a svelte beauty who danced professionally under the name of Natacha Rambova. His first wife was Jean Acker, an actress. At the time of his death, according to the newspaper stories of the period, he was said to be in love with Pola Negri and planning to make her wife No. 3. None of these was present when he died.

Valentino had long since fallen away from the Church. There was, however, a young man, who had known him when they were both boys in Italy. He spent much of the last three days of the star's life in the sickroom with him.

That young man, his same age, had become a priest with an Italian missionary society, and was an assistant in a small Italian-language church on New York's poverty-ridden East side. The newspapers, for a week, had been full of the grave illness of Valentino, and of highlights of his romantic career. It was noted that he had come to America as a dancer, and that his true name was Guglielmo.

The priest had read that story, and had wondered if this was the young Guglielmo he had played with in the streets when they both were boys in Italy. Valentino did

turn out to be his old friend, and so the priest went to him. For long periods of the last several days of Valentino's life he was alone with him in that room. From time to time, Producer Schenck, Manager George Ullman, doctors, and nurses tiptoed in and out. But the priest stayed close, to bring the star through a sudden and final earthly purgation of pain to the awful moment of the immediate judgment.

No Valentino movie had been without its torrid scenes of amour. Always he swept the pretty heroine into his arms and kissed her passionately, and women in the cinema palaces had been reported to swoon, just as a later generation of bobby-soxers purportedly did over another Italian youth, Frankie Sinatra. And Valentino, if one were to believe the gossip columnists, had been involved in many "love affairs."

But he pressed no burning lips to any woman in that death room. He died kissing a small silver crucifix placed in his poor, weak hands—hands that had caressed the prettiest women of the screen in many a box-office success—by a priest who remembered a young Guglielmo.

Funeral Mass of Requiem was offered in the actors' church, St. Malachy's, on 49th St. off Broadway. After the Mass, Valentino's body was shipped to Hollywood for interment. I was one of the reporters covering the Mass. As it progressed, I reflected on the infinite mercy of God.

They are all 12 or under, but they play and look like professionals

30,000 Little Big-Leaguers

By ARTHUR DALEY

Condensed from the *American Magazine**

NOTHING in the rules covered the situation. The umpires held up the game for 15 minutes. Pee Dee Kip, Hartford, Conn., shortstop, who aspires to be another Pee Wee Reese, was to blame for the delay.

Pee Dee had taken a throw at second and whipped the ball over to first. It looked like a double play. But the umpire called the runner safe at second. The Dodgers' Pee Wee would have stuck his chin up close to the umpire's face and squawked. However, Hartford's Pee Dee burst into tears, tears so uncontrollable that it took 15 minutes to quiet him down.

But Pee Wee is a big leaguer and Pee Dee is a little leaguer. Pee Wee is almost 32 years old and Pee Dee is under 12.

Everyone knows about the big leagues, of course. However, too few folks have heard of the Little League. The Little

League is big-league baseball in miniature, designed for boys from eight to 12 years. It began as a community project in Williamsport, Pa., in 1939. It was not much more than a supervised sand-lot proposition then. It stepped out a year later with three four-team leagues. It hung in a state of suspended animation during the war, but last year it had 2,034 teams in 37 states, and others in Canada, Cuba, Puerto Rico, and the Canal Zone. It can't miss including 2,500 or more fighting teams this year.

Each Little League is an entity in itself. It is locally financed, locally supported, locally governed, and locally supplied with personnel. The movement is strictly nonprofit. The over-all league headquarters are in Williamsport, its birthplace, but connection between the whole and the parts is slight. Not much more is required for a franchise than observance of the Lit-



tle League rules and formula — a four-team league, uniformed players in the proper age group and with the proper distribution of talent, a playing field roughly two-thirds of the dimensions of big-league baseball, smaller bats, balls, and other equipment, and, lastly, adequate supervision by grownups.

The youngsters play six innings a game instead of nine and bases are 60 feet apart instead of 90. As an extra flourish, all outfields are enclosed by a semicircular fence that's 180 feet from the plate, an ideal home-run range for the midget maulers.

Last year, 31,642 small boys gained places on regular teams in the Little League.

There were 78,606

in the tryouts. And 11,200 found places on the "farm teams." Yes, the Little League even has a minor-league farm system, just like its big brothers in the major leagues.

Supervising play in one way or another were 11,842 adults, an exceptionally high number, and 870 of them were women.

The Little League was born because of a boyhood dream of Carl Stotz. When Carl was a tiny youngster in Williamsport he wished to play baseball. Great was his disappointment during those early years, however, when the bigger boys, the teenagers, gave the little kids the brush-off when choosing up sides or picking their teams. Once in a

while a little fellow would get a break as a last-minute fill-in, but it was never more than that. That was when Carl was little.

Later, he saw his nephews forlornly sitting on the side lines while bigger, older, more talented youngsters used the diamond. What the little fellows needed, he reasoned, was competition in their own age group, with field and other equipment trimmed to their size.

Thus the Little League began. With friends, Stotz, then a minor executive in a bottling plant, started the project. It was just a community affair, but soon spread to adjoining towns and then to adjoining states.

Stotz was flooded with inquiries that he didn't have

the time nor money to handle. The Little League "World Series" grew too big for him and for Williamsport. But along came an "angel." The United States Rubber Co. offered to pay all "World Series" expenses. Then, in 1949, it agreed to pick up the tab for national headquarters, along with a salary for Stotz as a full-time commissioner.

Financing is simple. Each of four sponsors puts up \$200, a total of \$800 for each league. This pays for 48 uniforms, five dozen balls, two dozen bats, four sets of catcher's outfits, a home-plate rubber, a pitcher's rubber, bases, and a scorebook. Everything but the scorebook comes

A kid baseball team is made up of nine boys, eight of whom wish to be pitchers.

Homer Phillips

in miniature sizes. Since the Little League has nothing to sell but its principles, Stotz suggests that local merchants supply necessary equipment. This also has two strong psychological advantages. 1. Local merchants become Little League boosters. 2. Any possibility of the charge that the Little League prefers one dealer or manufacturer over another is eliminated. After equipment expenses, the balance goes into a pool for improving the field.

The secret of the success of the Little League movement—not one league ever failed—is the scheme devised by Stotz to give it balance. That is the player pool. At the formation of any Little League, four managers are assigned to teams. These managers are picked on a basis of character, because they are dealing with youngsters in their most impressionable years.

Once managers are named, the call is issued for candidates to engage in preseason "spring training," a tryout period which enables the managers to study the boys and grade them according to their abilities. As soon as the rating is done, each manager is assigned 36,000 credits (it's like having \$36,000 of play money) and an impartial "player's agent" auctions off the midget maulers. A manager may bid as high as he wishes for any player. But if he plunges too heavily on a miniature Joe DiMaggio, he must take "minor leaguers" to fill out the rest of his squad. Once

credits are all used up, names are drawn from a hat until each squad has 12 "regulars" and six "reserves." Each squad, by the way, is limited to five players who are the maximum 12 years of age, and it must include at least three who are ten or younger.

All players thus "purchased" become the permanent property of their "owners" for the rest of their Little League careers, a system not unlike organized ball's "reserve clause." They can be traded or even bought outright—if the buyer has sufficient credits to swing the deal. The player auction is kept completely secret—and for good reasons. A kid picked first might get delusions of grandeur. One chosen last might be branded by an inferiority complex. So there is no first nor last. A boy doesn't know whether he cost 20,000 credits or was picked for free merely to fill out the squad.

The cutting across all racial, religious, and financial lines is one aspect of Little League play. In Corning, N. Y., a year or so ago, the star pitcher for the sponsoring Masons was a Catholic boy of Italian descent. He beat the team sponsored by the Knights of Columbus. The Little League is a strong deterrent to juvenile delinquency. J. Edgar Hoover, head of the FBI, has given his enthusiastic endorsement. Police officials the country over have praised it. There probably are more police-department sponsors than any other.

Stotz's idea of garbing his Little Leaguers, not in T-shirts and peaked caps, but in regular uniforms, is good child psychology. Boys have an urge from babyhood to dress up like cowboys, Indians, firemen, policemen, or others who wear uniforms. The baseball uniform has become a badge of distinction in every community. The kids are proud to wear the uniforms. Mothers appreciate them even more. A mother who used to get "Aw, gee," when she asked Johnny to trot down to the store for a loaf of bread, finds that he is very proud to go on the same mission when he is wearing his Little League uniform. Some Little Leaguers have even worn the uniforms to bed, too delighted to take them off for anything as prosaic as pajamas.

When the Little League was started in Houston, Texas, three sponsors immediately came forth, but there was need for a fourth. Someone then thought of Eddie Dyer, a Houston resident in the off-season and at that time manager of the St. Louis Cardinals. Eddie was approached. "Count me in, pardner," he drawled. The manager of Dyer's insurance agency was Jeff Cross, a one-time Cardinal infielder. He became manager of Eddie's team. Eddie brought along some of his biggest stars, including Stan Musial, to tutor the kids when the Cards stopped in Houston on their way north from spring training.

Only a small fraction of the thousands of Little Leaguers will ever have the dream come true of playing in the Williamsport World Series. But merely having a goal is a help. All of them, however, know what Williamsport looks like. They know because Emerson Yorke, a professional motion-picture man, visited the Little World Series in 1948 as a tourist. He gasped when he saw the high caliber of play, outlined against a colorful, picturesque setting. As soon as the first game was over, he called his New York office. "Send down three full camera crews for movies," he ordered.

The pictures were shown to two million persons at meetings of civic clubs and fraternal organizations. His theater-size 35-mm. film, distributed by request only, was seen by another two million. He doubled those figures last year.

When Naugatuck, Conn., decided to have a Little League in 1949, the only available site was much too small. So the citizens went to work. They burrowed into the side of a hill and excavated some 3,000 cubic yards of earth. One unpaid laborer was Frank (Spec) Shea, a Yankee pitching hero two years previously. He donated his trucks to haul away the earth, and felt well repaid when the diamond was named the Peter J. Foley field in honor of his high-school coach.

The Naugatuck folks now estimate the value of their Little League installations at \$75,000. They have

a clubhouse that's even equipped with showers. They have two electric scoreboards, a public-address system, stationary bleachers, grassed field, flagpole, backstop, and even refreshment stands.

For many years the major leagues have been worrying because their sources of supply have been drying

up. Today's newer generation doesn't play hard ball in as great numbers as the kids of yesterday did. However, an idea which began as a simple community project in Williamsport may become the salvation of baseball.

It may awaken new interest in our great American game.



Something in Common

I WAS on the *Peninsula 400*, which leaves Chicago at 4:10 P.M. This train carries commuters to Kenosha, Racine, and Milwaukee. I knew none of the people aboard, but I guessed that they were a typical cross-section of the group often called "hard-headed American businessmen."

From behind my newspaper, I saw a member of the Travelers' Aid seat a very foreign-looking man and woman. Their suitcases would have made good props for a comedy. The labels were evidence of their distant homeland.

Stiffly, the couple sat in their seats. With sad wonderment they watched the North Shore scenes unfold before them. Occasionally they exchanged a few sober words in their native tongue. They kept their voices low, as though afraid of being overheard. But for the most part they sat quietly like two chastised children. They returned unsmiling or evaded the interested glances from their fellow passengers. No one was able to push back the pitiful, lonely look in their dark eyes.

Then, one of the men sitting across the aisle showed them his rosary and a picture of our Lord. That did it. The sad little lady was transformed into a brilliantly smiling person. She nodded eagerly and nudged her companion. He turned his eyes toward the rosary. His face lighted up. Shyly the lady reached into her pocket. She, too, carried a rosary.

Again the two strangers looked around the car at these American men and women. This time they gave smile for smile with eyes that shone with happiness. They spoke to each other excitedly.

The foreigners left the train at Kenosha. We watched them standing on the platform lost, perhaps, but no longer alone. Several commuters stood with them, reading a slip of paper the man held.

Ruth McFadden Svec in the *Racine Journal-Times* (31 March '51).

Captain Jabara, of the U.S. Air Force in Korea, tells how he downed six enemy jets to become the

First Jet Ace

By CAPT. JAMES JABARA

Condensed from *Air Force**

I HAD begun to think I never was going to get that fifth enemy jet plane. I got my fourth on April 22, but the pickings had been pretty lean since. Then, in late afternoon of May 20, 14 of our F-86 Sabres from the 4th Fighter Interceptor group were jumped by 50 commie jets over Sinuiju, near the Yalu river.

I was in the second wave of 14. I tacked on to three enemy jets, the famous MIG's, at 35,000 feet. I picked out the last one, and bored straight in. My first two bursts ripped up his fuselage and left wing. At about 10,000 feet the pilot bailed out. It was a good thing he did, because the MIG disintegrated.

Then I climbed back to 20,000 feet to get back into the battle. I bounced six more MIG's. I closed in and got off two bursts into one of them, scor-

ing heavily both times. He began to smoke. When my second burst caught him square in the middle, he burst into flames and fell into an uncontrolled spin. All I could see was a whirl of fire. I had to break off then because there was a MIG on my tail.

That was my bag for the day, and it made me feel pretty good to know that I was the first jet ace in the history of aerial warfare.

We fight a private little war up in MIG Alley. On our side of the Yalu river is the 4th Fighter Interceptor wing. On the other side are the Red MIG-15's. The capabilities and general characteristics of the two airplanes are just about the same. The battle tactics of the enemy are quite similar to our own. And he holds many advantages.

Here's where the puzzle comes in.



*McCall St., Dayton 1, Ohio. June, 1951.

17

We've knocked down or damaged several score of MIG's—how many I don't know. We've lost exactly one of our planes to enemy action and one from causes unknown. We're not magicians. We're just average fighter pilots with some previous combat time, sound tactical training, and a little patience to wait for the other guy to make a mistake. But the score is lopsided, and I guess the enemy, too, is wondering why.

The Sabre outfits are in Korea to shoot down as many MIG's as we can, to help retain air superiority for our side, and protect our battling ground troops from enemy air attacks. But there are a few ground rules. We have to go up to their ball park, MIG Alley—in far northwestern Korea, near the Yalu river, that splits North Korea and Manchuria, or the enemy won't play. That means a one-way trip of 250 miles or more, depending on where we're based. That's a lot of distance, measured in jet fuel. The home team has a big advantage. While we're burning up a third of our fuel on the trip to MIG Alley, we have to save the same amount to get home again. That leaves us a third to stay in the area, hunt for the enemy, and fight him. Dog fights really eat up fuel, whether you're diving, climbing, or just maneuvering at high speed.

The MIG is rugged—make no mistake. It can soak up a lot of battle damage. I still don't know

why some of the planes I hit didn't go down. I could see the armor-piercing phosphorus-loaded incendiary bullets sparkle on impact as they hit the wings and fuselages. I guess the MIG is almost as rugged as our Sabre, and next to the Sabre I would rather fly the MIG than any other fighter.

Early in the air war—we were fighting the MIG's back in December—they would split up into elements of single planes, unprotected and generally at our mercy. Maybe they had no planned tactics, for they were certainly easy pickings. Now they generally stick closer together, and we have to bounce twos instead of singles. If desperate, they loop, roll and split-S. At times we see the MIG's pulling vapor trails. Then they duck below, and we can't see them. They hope that we think they've left the area. Actually they're waiting to bounce us. We haven't fallen for that trick.

The escort work we've done for FEAF Bomber Command B-29's has presented tough problems in tactics. On April 12, for instance, more than 225 planes, friendly and enemy, were in the air at one time. The Superforts were leveling the important rail bridge at Sinuiju on the North Korean side to slow down Red supply. That day the MIG's showed that they are more aggressive against B-29 formations than against fighters. We were at a disadvantage because we had to slow down for proper escort. By the

time we dropped our external tanks and got up speed, the MIG's had roared through the bombing formations with cannons blazing.

We countered this by keeping four plane elements together and taking our chances on superior gunnery. The MIG's feinted, hoping we would follow and leave the bombers unprotected. We stuck. And shot. In that April 12 battle our F-86's, plus escorting F-84's and the B-29 gunners, got eight MIG's for sure, probably destroyed seven, and damaged 18. We lost some Superforts but no fighters.

In a fighter vs. fighter engagement, the fight usually starts at 35,000 to 40,000 feet. It can wind up 50 feet above the ground. If the MIG's strike first, and we're not in firing position, we break hard to the left or the right, and down, so we can maneuver for a better position. A wingman covers each element leader. The wingman doesn't fire unless he has specific instructions, or gets separated. When I'm concentrating on my sights, trying to handle the Sabre smoothly, and following the enemy's gyrations, I don't have time to look around and protect myself. The wingman acts as an extra set of eyes for me. He watches for MIG's and friendly planes, and gives me radio warnings or signals. To me he's worth his weight in .50 caliber ammo.

It we're outnumbered, or the fighting gets too rough, then we maneuver around and wait for the

enemy to make a mistake. Thank God he makes more than his share of them.

Like the one he made in the big scrap on April 12. I was at 25,000 feet and he was 5,000 feet beneath me, heading for the B-29's. That advantage in altitude was my break, and I used it to get speed. I caught him just as he was in range of the B-29's. The bullets saddle-stitched his fuselage, but he went into loops and rolls. He was badly crippled. Another burst got his engine, and I saw him crash trying to leg it across the Yalu.

The numerical odds were against us on April 22. Our 12 Sabres were outnumbered three to one. With Capt. Norbert W. Chalwick flying protection for me, I took my time about getting behind a couple of MIG's, and hit them both with short bursts. I had to pop my dive brakes to keep from running into one. I was still firing as he rolled on his back. I followed him down, but I didn't realize how close to the ground I was until he crashed. I had a hard time pulling out of my dive. I blacked out, but fortunately my eyes focused in about three seconds, and by instinct, I guess, I was headed upward.

That was my fourth kill. The first one was on April 3. My wingman and I were two against two, then. We saw the MIG's first at 7,000 feet, and I used 1200 rounds, damaging the engine of one MIG that flamed out and crashed about

ten miles from its home field. I also damaged the other.

On April 10 we were MIG hunting again in the Alley. We let down from 36,000 feet through the undercast and broke out in the clear at 10,000. We saw six MIG's at 5,000 and bounced them. Four broke up into the overcast and two broke down toward the ground. They shouldn't have done it. I took after them. I scored hits on the wingman. With my 1800 rounds of ammo I stayed with the MIG for about 30 seconds, meanwhile radioing my wingman to start shooting.

This proved unnecessary, as the enemy pilot suddenly bailed out about 30 miles south of Sinuiju. I

was flying almost at the speed of sound and couldn't see much, but he had a light blue parachute, black helmet, and gray oxygen mask.

I don't get nervous any more. I outgrew that in the last war. But the strain is greater now because of the high speeds, split-second timing, and the fact that the Sabres and MIG's look alike. We have good equipment, superior leadership and training, and I know that our pilots are better than theirs, whoever they may be. Col. John C. Meyer says we're the champs of the 2nd World War, and I guess that applies to this one, too. At least the score thus far would indicate as much.

Flights of Fancy

Her mouth goes without saying.—*Seydell Quarterly.*

Diamonds are chunks of coal that stuck to their job.—*Forbes Epigrams.*

The clock reluctantly released the minutes.—James Keller and Meyer Berger in *Men of Maryknoll.*

People who aren't afraid to roll up their sleeves seldom lose their shirts.—*Pulse.*

Hangover: Something to occupy a head that wasn't used the night before.—*Great Northern Goat.*

Children today get a big hand, but not where it will do the most good.—*Mrs. S. H. Pruitt.*

Adolescence is an age at which children stop asking questions because they know all the answers.—Jeanne Opalach in *Saturday Evening Post.*

A bachelor: One who is footloose and fiancée free.—Roger Allen in *Grand Rapids Press.*

Washington: Where sound travels faster than light.—*Wichita Eagle.*

A television comic is a man who thinks that what was good enough for your grandfather is good enough for you.—Frances Rodman in *Saturday Evening Post.*

She put her problems aside for a brainy day.—*James L. Sawyer.*

[Readers are invited to submit similar figures of speech, for which \$2 will be paid on publication. Exact source must be given. We are sorry it is impossible for us to acknowledge or return contributions.—Ed.]

There is no "wall of separation" between Church and State

A Protestant Looks at the Schools

By HENRY P. VAN DUSEN

Condensed from a book*

THE cherished American principle of "Separation of Church and State" is being rerubished and redefined to ends for which it was never intended. Constitutional guarantees of "freedom of religion" are being reinterpreted by the U. S. Supreme Court with meanings which would have outraged the framers of the Constitution. The founding fathers may have rejected particular religious dogmas of their day. But almost without exception they were profoundly religious men, as references in their documents show. We do not associate Benjamin Franklin with orthodox belief nor even notable piety. But he once summarized a lifetime's reflection as follows: "I have lived, sir, a long time. And the longer I live, the more convincing proofs I see of this truth: that God governs in the affairs of men. And if a sparrow cannot fall to the ground without His notice, is it probable that an empire can rise without His aid? We have been assured, sir, in the sacred writings that except the

Lord build the house, they labor in vain that build it. I firmly believe this; and I also believe that without His concurring aid we shall succeed in this political building no better than the builders of Babel; our projects will be confounded and we ourselves shall become a reproach and a byword down to future ages."

A nation without religious faith, or a system of education for its youth without recognition of God as the ground of Truth, would have stirred the authors of the Constitution with profound misgivings. It has been aptly said that they sought to provide freedom of religion, not freedom from religion.

Henry Van Dusen was born in Philadelphia, educated at Princeton, Union Theological Seminary, and Edinburgh university. He has, for a quarter-century, been Roosevelt Professor of Systematic Theology and president of the faculty of Union Theological seminary. He is active in the World Council of Churches, a trustee of the Rockefeller foundation and of Princeton university. His books cover many fields.

**God In Education*. Copyright 1951 by Chas. Scribner's Sons. Reprinted with permission. 128 pp. \$2.

They intended to exclude not faith but sectarianism.

Jefferson was ambassador to France when the 1st Amendment was adopted. He had no hand in its drafting. Jefferson did oppose control of public education by any particular church. But, setting forth his ideals for his own University of Virginia, he wrote, "It was not, however, to be understood that instruction in religious opinion and duties was meant to be precluded by public authorities, as indifferent to the interests of society. On the contrary, the relations which exist between man and his Maker, and the duties resulting from those relations, are the most interesting and important to every human being, and the most incumbent on his study and investigation. The want of instruction in the various creeds of religious faith existing among our citizens presents, therefore, a chasm in a general institution of the useful sciences." It must be recalled that, at this time, a particular Christian sect was in fact established in no fewer than five states. There was no suggestion that the 1st Amendment would affect those establishments. Indeed, the word *respecting* in the phrase "respecting an establishment of religion" of this Amendment is ambiguous.

Prof. E. S. Corwin, a famous authority on our Constitution, writes: "This is a two-edged word: it forbids Congress to pass any law *disfavoring* as well as any law *fav-*

oring an establishment of religion. I suggest that the word *respecting* was adopted as much to protect the establishments which then existed in five states—Massachusetts, New Hampshire, Connecticut, Maryland and South Carolina—as to prevent Congress from setting up a national establishment."

Dr. Corwin concludes his study of the views of the founding fathers with this judgment: "I sum up Madison's and Jefferson's attitude, therefore, not as demanding that public-supported education should be exclusively secular and admitting no religious elements; but that no public authority should give a preference to any religion or any denomination. Preference, special advantage, for this, that or the other religion or denomination, was what they wished to rule out and what they thought had been ruled out by the 1st Amendment."

Justice Story, a contemporary and colleague of the great John Marshall, and a famous commentator on our laws, reviewed the matter from the standpoint of personal remembrance as well as legal scholarship. "Probably at the time of the adoption of the Constitution, and of the amendment to it now under consideration, the general, if not the universal, sentiment in America was that Christianity ought to receive encouragement from the state, so far as was not incompatible with the private rights of conscience, and the freedom of reli-

gious worship. An attempt to level all religions, and to make it a matter of state policy to hold all in utter indifference, would have created universal disapprobation if not universal indignation."

It would be difficult to frame a more accurate and adequate summary not only of the attitude and intention of the founding fathers but also of both the principle and the practice of the American nation regarding the role of religion. At only one point does Justice Story's statement require modification. The multiplying diversity of religious faiths and, more particularly, the numerical increase of Jews have put some restraint upon special encouragement of Christianity.

Prevailing relations between government (whether national, state or local) and religion should be matters of common knowledge. They do not indicate "a wall of separation." On the contrary, state and religion, even state and church, have been and are intimately intermingled at all levels. The practice of the American people acting through their governments in this matter has been and is very close to the intention of the framers of the 1st Amendment as Professor Corwin understands them, aid to "all religions" without preference for "one religion over another."

Some of the ways in which the national government has shown its concern for religion are: 1. Setting apart of days for national Thanks-

giving or prayer. 2. Provision for chaplains in both Houses of Congress. 3. Appointment of chaplains in the armed forces. 4. Almost universal recognition of God and appeal for divine assistance by successive Presidents and leaders of government generally.

A few of the ways in which both national and state governments are directly involved in relations with the churches are: 1. Appointment of chaplains for the armed forces. 2. Appointment of chaplains in penitentiaries, hospitals and other government-maintained institutions. 3. Specific exemption of ministers' residences from tax liability, and recognition of contributions to churches as deductible, on federal and state personal income taxes.

Perhaps the most widely prevalent way in which state and local governments grant churches exceptional recognition is in the exemption of church property from taxation.

But the concern of these same public agencies for religion is most clearly and significantly revealed in the provisions many make for instruction in religion in educational institutions at both school and college levels.

Programs of religious instruction at state schools present an interesting variety. Where departments of religion are within the regular curriculum, they may deal largely or even exclusively with religion in its generic and universal meaning. Or

they may present the beliefs and practices of one or more of the faiths most widely professed. Courses in religion offered in other departments of the curriculum have such titles as *The Bible as Literature* or *The Psychology of Religion*. Perhaps most interesting, and most significant are the arrangements in a dozen state schools for courses offered at "schools" or "colleges" of religion set up for this purpose on or near the campus. They may be elected by students with full academic credit. For example, while Michigan prohibits the use of state funds for "indoctrinational" religious courses, its state college has established a department of religion. The teachers come from Catholic, Jewish, and Protestant student centers near by. The courses have full standing and the instructors are faculty members. In Iowa, for many years a well-equipped and highly regarded School of Religion has been associated with the university, though supported entirely by non-official funds. Since 1938, however, the university has assumed the expenses of the school including the salary of its director. These run to \$10,000 a year. Thus, in several instances, the state is directly and actively a partner of the church in giving religious instruction. A rigorous application of the ruling in the McCollum Case would threaten if not invalidate present practices in 90% of the state universities and colleges of the land.

In summary, this theory of "a wall of separation between church and state" far from perpetuating a national tradition, creates an innovation. It is in direct contradiction to the conviction of our forebears and the habits of the nation.

The authentic "American tradition" has been admirably set forth by Dean Weigle, who was for many years the head of Yale's Divinity school: "Here in America we believe in the separation of church and state. It is a sound principle, but one that is much misunderstood. It means just what the phrase implies—that church and state are mutually free. It means a separation of control, so that neither church nor state will attempt to control the other. But it does not mean that the state acknowledges no God, nor that the state is exempt from the moral law where-with God sets the bounds of justice for nations as well as for individuals. . . .

"... America has no state church; but the American government is not godless. The American government favors no sect and fosters no sectarianism. It is founded upon faith in God and it protects religion.

"There is nothing in the status of the public school as an institution of the state, therefore, to render it godless. There is nothing in the principle of religious freedom nor the separation of church and state to hinder the school's acknowledgment of the power and good-

ness of God. The common religious faith of the American people, as distinguished from the sectarian forms in which it is organized, may rightfully be assumed and find appropriate expression in the life and work of the public schools.

"The court's interpretation of what the 1st Amendment meant to the founding fathers who propounded it and voted for it is untrue, a falsification of history produced by methods of handling evidence which would shame any competent graduate student. In its declaration of what the 1st Amendment means today, the court is making law. That may be one of its functions; but the falsification of history with which it attempts to support the new interpretation cannot command respect."

As Professor Corwin puts it, "Undoubtedly the court has the right to make history, as it has often done in the past; but it has no right to remake it."

To those concerned, and every religiously minded American should be concerned, the Supreme Court's decisions are a direct challenge. The court has been wrong more than once before. It has ways of correcting its own misreading of the law as well as of changing laws.

whose established readings it feels to be obsolete.

If there is any justification for the court's position, it cannot be discovered in its faithfulness to precedent but rather in its sensitiveness to what it believes are realities of American life today. The court's interpretation of the Constitution is one more reflection of the progressive secularization of American life. And yet this drastic prohibition of religious teaching in the publicly sponsored schools comes at the moment when there is a steadily mounting demand for more religious instruction in state-supported higher education. The Supreme Court is actually not sensitive to the public mind.

The court will correct its error only after it correctly interprets contemporary realities. The American people have the power, and it is their duty, to make clear that they still desire for their children, as their forebears did, the influence of religion in public schools. They have the duty to demand that their Constitution be interpreted as its authors intended, and as it was in fact always interpreted. Only thus can there be provision for religious instruction and religious worship in public schools and colleges.

USED to be that you just got a licking when you brought home a report card with low grades. Nowadays you get drafted.

Changing Times.

Its popularity has spread even to the male sex

Mary Is a Grand Old Name

By CHARLES R. MULROONEY

Condensed from *Queen of All Hearts**

WHEN it comes to naming the baby, American parents have left no uncertainty about their first choice, if baby is a girl. It is Mary, of course. Elsdon C. Smith, in his recent book, *The Story of Our Names*, estimates that there are 3,720,000 Marys in the U.S. alone. Elizabeth, next in order of popularity, is not even half as common as Mary.

Mary is the name you are most likely to associate with ordinary folks, though it becomes a queen or princess as well as anyone else.

America is not exceptional in this respect. Italy has its share of Marias, and Canada and France their Maries. We readily recognize the Marja of the Poles and the Marya of the Russians. Some may have heard of the Hawaiian Mele. Every language has its equivalent. It is said that one woman in every four in Ireland has the name of Mary or a variant. Wherever

Catholic tradition has been strong, the name of Mary flourishes. The Blessed Mother's image may have been defaced in the Protestant Reformation, but, strangely enough, Mary's name has lived on even in the children of those who would have erased her memory.

The name has taken different forms at times. Miriam is the Hebrew. In modern times, Mary may be slightly disguised in May, Marian or Molly. Catholic devotion to Our Lady has given us adaptations made from her titles, as in the

names Virginia and Sharon, or again from her feasts, as in Dolores, Carmel, Consuelo, and Concetta; or even from her shrines, as in the case of Loretta, Imogene, and Guadalupe. To our Sisters, however, must go credit for deriving the most names from Mary's hymns and feasts. A poetic alphabet of names might almost be made from them: Alma, Annunciata,



Benedicta, Carmelita, Consolata, de Lourdes, Dolorine, Dolorita, Gratia, Immaculata, Madonna, Marietta, Rosaria, Maris Stella. But even here our nuns have not dispensed with the homely, beautiful name of Mary. In every case where it would not seem repetitious, it is affixed to the name nuns take at their profession.

Song writer George M. Cohan, who told us "Mary is a grand old name," was certainly echoing popular sentiment. But what if the new baby should be a boy? Then, according to our research scholar, the popular choice is John. But Our Lady's name is available. Italy has given us Mario; England has Marion for a boy's name, although

infrequently. Catholic custom permits the use of Mary's name as a boy's second name. We see it in the case of St. Louis Mary De Montfort. We have it even in Victor Marie Hugo.

The great historian of the Catholic Church in America, John Gilmary Shea, changed his name to include Mary's. As John Dawson Shea he adopted the name *Gilmary* in early manhood. *Giolla* is the Celtic name for servant or slave. Centuries before, it had been often combined with the name of Christ or His saints. People took names like Gilchrist, Gilmartin, and Gilpatrick, which now survive as family names. Shea named himself *Gilmary*, the servant of Mary.

Family Pride

PREPARING for his firstborn, he thought of the things they could do together. He would teach it the goodness of God, baseball, golf, fairness, the beauties of life.

His son was born mentally retarded. A lesser man might have lamented his destiny, or felt such self pity that his outlook would be twisted, or asked God, "Why?" But he continued more strongly in his faith, and is never too tired to make Sunday Mass at 5 A.M. before going to work, nor does he think Friday novenas too long after a full day of standing on his feet.

He carries his son proudly for his daily airings and endless trips from doctors and hospitals. He prays silently that the answer will be other than: "Put him away; no one expects you to bear such a sorrowful burden." He thinks then of Mary and her anguish and sorrow and is strengthened by it.

Yes, my husband is the most interesting living Catholic I know.

Mrs. Joseph Lojkovic, winner of "Most Interesting Living Catholic" contest, *Novena Notes* (20 April '51).

*An ordinary kitchen seasoning gains importance
in the medical laboratory*

Salt May Save You

By J. D. RATCLIFF



IN YOUR kitchen is a wonder drug so plentiful and so simple to use that it could save tens of thousands of lives in the event of a large-scale disaster, such as atomic bombing. This substance is the salt on your pantry shelf.

Almost any drastic injury may induce shock. Shock can be more serious than the injury itself. In shock, our tiniest blood vessels, the capillaries, go flabby. Blood fluids leak into tissues. Puddles of stagnant blood fluids are left at various points in the body. As more and more blood fluid leaks into tissues, the heart has less and less blood to pump. Blood pressure falls. Trying to fight off disaster, the heart speeds up. It flutters. Temperature falls, lips get blue, the body becomes clammy. The brain becomes starved of blood. The victim loses consciousness. Finally the heart itself lacks sufficient blood for nourishment to keep pumping. Life flickers out. Such a lethal sequence follows auto smashes, accidents with farm machinery, burns in the home.

Doctors can inject relatively enormous amounts of plasma or whole blood into veins. But doctors, and

blood, aren't always immediately available. In an atomic attack it could be hours or even days before medical attention would become available. But you can act. Research now indicates that salt water taken by mouth is effective in combating shock. It is rapidly absorbed by the intestines and enters the circulation to replace lost fluid.

The story of discovery begins in 1940. Dr. Sanford M. Rosenthal of the research division of the Public Health Service is one of the pioneer workers with sulfa drugs. He is the discoverer of diasone, the promising new antileprosy drug. Rosenthal and his associate, Dr. Herbert Tabor, worked for months with 14,000 mice. The two scientists learned how to produce killing shock with clocklike regularity. Their next step was to find means of preventing death. Rosenthal injected shocked mice with plasma and mouse-blood serum. These were old procedures. Next he injected a salt solution. Success was uneven.

Then Rosenthal had a brilliant hunch. Why bother injecting? In the intestine, saline solution is picked up rapidly by the blood.

Why couldn't you transfuse a mouse simply by letting it drink salted water? One catch, of course, was that many of the animals were too ill to drink. Rosenthal slipped a tiny tube down their throats and dropped saline into their stomachs. Results were eye-opening. Dr. Rosenthal knew from experiment that if such mice were left untreated not one in ten would survive. But, if they got enough salt water, he found, nine out of ten lived! Indeed, with some types of shock, salt water by mouth gave results as good as intravenous injections. Further, it was easier to administer large amounts of salt water by mouth than to inject large quantities of fluid in a vein.

Remarkable facts came to light. If given only enough salt water to replace blood and fluids lost into injured areas, only half the mice survived: not a very good record. But if twice the blood loss were given, 67% lived; and if three times the loss were given, nearly all were saved. Evidently, large amounts of salt water were needed to save life. This, perhaps, explained why physicians had such poor results injecting saline as a treatment for shock in humans. They used it too sparingly. The work with animals indicated that to ward off shock, a human might need to drink as much as two gallons of saline in the first 24 hours after injury.

After Rosenthal's discovery, phy-

sicians and surgeons in several cities translated the work from mice to men. First they tackled shock induced by burns. Fluid loss by seepage is always great after a burn. You have seen it yourself on a small scale: the watery blister that forms after you touch a hot iron or stove. Enormous amounts of saline solution were poured down the throats of badly burned persons. If they were unable to hold it, they got it by vein. Most burned people drank eagerly; thirst goes with bad burns.

In one hospital a group of burned patients got plasma and other shock-fighting materials. A second group got salt water alone. Although too few persons were involved to have statistical significance, results were considerably better in the saline group.

One woman had bled badly after having a leg cut off by a subway train. A man had dived from a flaming projection booth at a motion-picture theater, breaking many bones. Other patients were suffering from knife and gunshot wounds. All responded to the salt water treatment.

The results mean that for the first time something can be done to save accident or bombing victims before the doctor comes. In the golden period of an hour or so before a seriously injured person goes into deep shock, antishock measures may succeed. Salt solution can be immediately prepared.

Memorize the following figures, they may one day save a life. One level teaspoonful of salt to a quart of water; that's the basic solution. Half a teaspoonful of baking soda should be added to combat the acidosis that goes with shock. The *exact* amounts are important. Too much salt leads to nausea and too little will not do the job. The victim is usually conscious for a period. During this time he should be coaxed to sip as much saline as possible. Severely injured persons may require the equivalent of 10% of their total body weight during the first 24 hours.

In an atomic disaster, saline solution could mean life or death for thousands. Most persons fear, above all, the radiation effects of an atomic explosion. Some estimates indi-

cate that in a crowded American city, burn deaths might account for 60% of total casualties.

Let one point be absolutely clear. Saline is not a complete substitute for blood. It replaces volume. And it supplies the sodium needed to keep the body in mineral balance: salt is sodium chloride. But it does not supply the proteins necessary for tissue nourishment nor the red cells necessary to ward off anemia. Saline is a vital first-aid measure which keeps people alive until medical aid becomes available. Further, it stretches the supplies of blood available in any emergency. But it does not supplant the need for blood donations. No one should read this article and conclude that donations of blood to the Red Cross are no longer necessary.



Salt May Kill You

By BERTRAM VOGEL

Condensed from *Tomorrow**

THE average American, consuming eight to 15 grams of salt a day, actually uses 25 times as much salt per pound of weight as the lion, and 200 times as much as the gorilla, the chim-

panzee, and the orangutan. The average American matches the salt intake per weight of the walrus, which drinks only salt water.

American salt intake is enormously greater than that of primi-



*11 E. 44th St., New York City 17. June, 1951. Copyright, 1951.

tive tribes and Asiatic and tropical peoples. Is it coincidence that both hypertension and congestive heart disease are far less common at early and middle age to those millions of people than they are to us? Are we, by our addiction to vast amounts of salt, breaking down our bodies and killing ourselves off far more rapidly than nature intended? Some medical theorists think so.

The success of the so-called Kempner diet for hypertension would seem to prove it has. This diet, formulated and reported in 1944 by Dr. Walter Kempner, Duke university, consists largely of rice, fruit, and fruit juices. The diet reduced even abnormally high blood pressures to a normal or near-normal level.

Doctors everywhere were bewildered. What, asked the medical profession, was so remarkable about rice and fruit juices? Chemists quickly answered: rice and fruit juices are almost entirely free of salt.

Many research men have since experimented with salt-free diets. In Chicago, at the Michael Reese hospital, three doctors discovered that they could produce cardiovascular and kidney changes in chickens simply by adding salt to the drinking water. For weeks they measured blood pressure before, during, and after substitution of a 1% saline solution for ordinary water. The findings were clear: blood pressure rose sharply with

salt intake, fell promptly after withdrawal with repeated experiment. Finally, the degree of high blood pressure appeared to depend entirely on the concentration of salt in the water fed to the chickens.

Elsewhere, a physician conducted his experiments with hypertensive rats. He selected normal, moderately hypertensive, and severely hypertensive rats. He offered them choices of foods containing varying amounts of salt. By instinct, the rats with hypertension chose the food containing little salt.

Five doctors at Mt. Sinai hospital in New York City conducted experiments with eight human hypertensive patients. Six were so ill that they had sought hospitalization because of incessant, severe headache. For two to three weeks, the patients ate the regular hospital diet. Blood pressure and recorded fluid balance were tested daily. Other laboratory tests were made to establish physical condition. Then, one day, patients were restricted to a maximum of one gram of salt a day. A drug was injected to speed up sodium depletion in the body.

The results were dramatic. Blood pressures began to drop significantly in a few days. Abnormalities in the retina of the eye, caused by the high blood pressure, began to clear up. Five of the six patients with severe headaches suddenly discovered that their headaches had completely disappeared; the sixth pa-

tient experienced mild complaints.

In California, seven doctors experimented with the salt diet of 59 patients. Among 25% of the patients, blood pressure declined considerably. Eighty per cent reported that their headaches disappeared. And the majority obtained substantial relief from almost all of

the symptoms associated with their illness.

Whether salt will prove to be the final clue to the riddle of high blood pressure is as yet uncertain. What is important, however, is that as a result of recent research, salt has finally been recognized as one of the chief clues to human health.

This Struck Me

*The Church refuses to recognize death as the end. Death, after all, is merely a beginning. But in death, the Church sees the accomplishment of justice, "for theirs is the kingdom of heaven." Within the Church, the just can face death patiently, even with joy. Unexpected, though thoroughly consistent, is the attitude of the old woman as described by her deathbed counselor, Father John L. Bonn, in the chapter called "The Catholic Viewpoint."**

She was a very old lady, and I tried to break it to her gently, and I said, "Aunt Lizzie, as long as I'm here, wouldn't it be a good idea to bring you the last sacraments?"

She rose up on her pillow and looked at me squarely. "Now, see here," she said. "I've been a Catholic for 86 years, and I've paid my way all the time, and I want everything that's coming to me." So I anointed her, and then we recited the Rosary and the prayers for a happy death until there was no more to be said, and the family rose from its knees and went out. I leaned over her then. "Is there anything else I can do for you?" I asked her.

She rose up again, and said, "Yes, there is. I've always celebrated every sacrament I've ever had and I'm going to celebrate this one. Go on downstairs to the cellar and look under my gardening gloves, where no one can get at it, and fetch me the bottle of champagne that's there. We'll drink it to this."

*These Harvest Years. Doubleday & Co., Inc. Garden City, N. Y. 1951. \$3.49.

For similar contributions of about this length with an explanatory introduction \$25 will be paid on publication. We are sorry, but it will be impossible to acknowledge or return contributions. Acceptance will be determined as much by your comment as by the selection.



War photographers, Sgt. Herbert Nutter, Los Angeles, U.S. Army, and Carl Mydans, *Life* magazine, at Inchon, Korea, invasion.

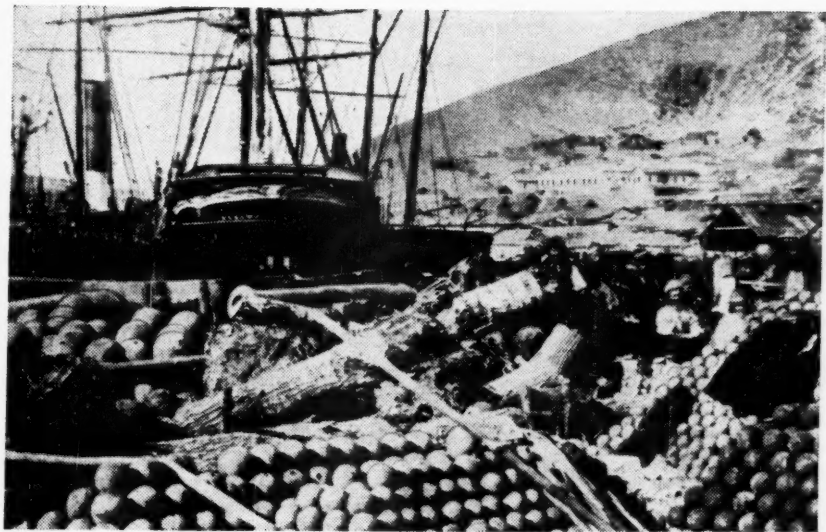
War Photos—Crimea to Korea

EVER see the line "via radio" or "photo wire" on a Korean war picture? If it's in the evening edition of your paper, you can assume that the action took place that morning. Today's combat cameraman goes to the front needing only his speed camera and a supply of film pack or roll film. When Roger Fenton took the first war photographs in the Crimea in 1855, he needed a heavy van to carry his chemicals, tools, 700 glass plates, and five cameras.

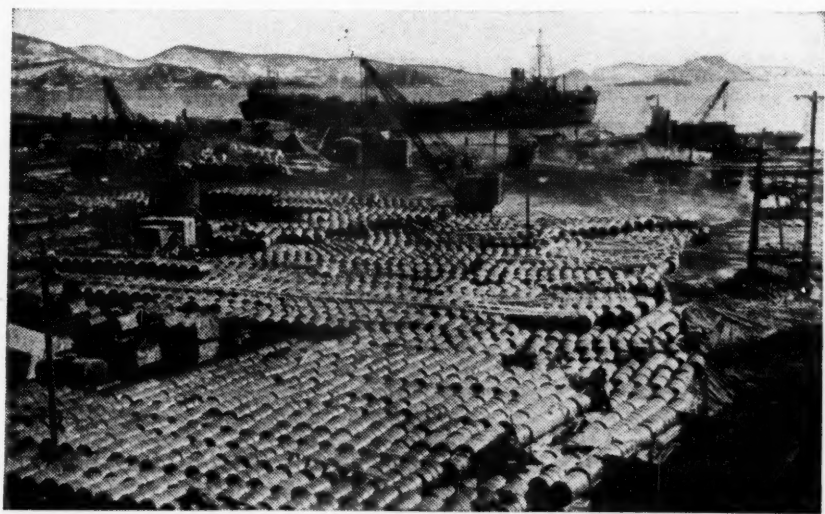


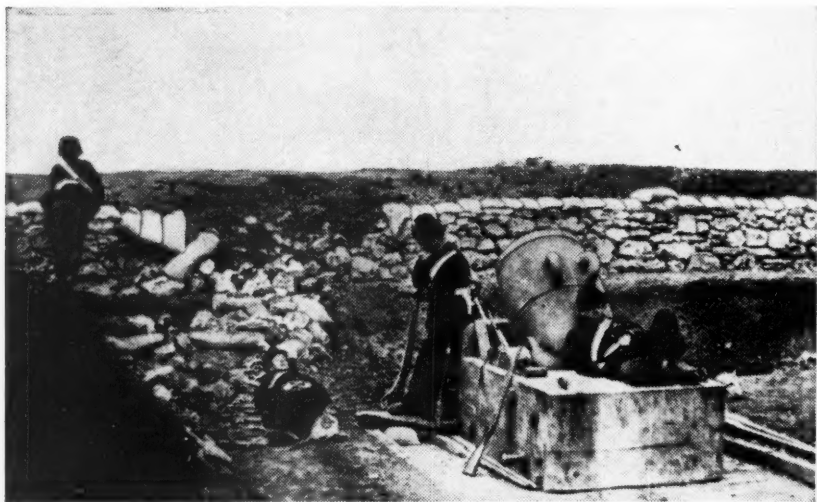
Except for the tanks in the Korean U. S. army camp picture (below), the aspect of mobile warfare in the hills is little different from the allied bivouac in the Crimea of 1855.





An invasion harbor in Korea (below), where supplies are being dumped, is as clogged as the harbor at Balaklava, in the Crimea (above), in 1855.





Whenever the unending "hurry-up-and-wait" routine allows, the infantryman takes a break. Fenton's 1855 shot (above) and today's Korean picture (below) catch lulls in the same mood.





Back in 1855, cannon and caissons rolled from British freighters at Balaklava. Today (below) supplies move to a long file of waiting trucks. The picture was taken at Hungnam in Korea.





Men Behind the Camera

The man clicking a camera shutter, like any GI, is often haggard, unshaven, and dog-tired. Pictured is Sgt. Charles B. Turnbull, of Miami, Fla.



Pfc. Tomi Yamamotti, a Nisei from Seattle, goes with the army in a reconnaissance car. Like other combat cameramen, both of the services and publications, he penetrates deep into enemy territory.

Photographing street fighting in Seoul is as dangerous to the cameraman as to the sharpshooters (below). This is true, too, of this picture of Marines moving up in a burning Korea city (right).



Only a fearless man would dare to photograph the firing of a 3.5 rocket launcher. This is a picture taken of U. S. troops at the front in Korea.



The photographer had to be there, with the parachute troops, to take a shot like this. This paratrooper is tying up his chute after landing.



Photographers from the days of Roger Fenton have shown war history in all its phases. They have helped us see the fighting man in action and at rest. They have pictured fighting men as they knelt to pray before they went into action. These men, on board the USS *Fred Ainsworth*, are hearing Mass. They are on the point of debarking for combat at Inchon, the port of Seoul, capital of Korea. Chaplain John J. O'Neill, St. Paul, Minn., USN, says the Mass.

Wait to Marry Your GI

War changes people, physically and mentally, both at home and at the front—and how about the baby?

By ✠ WILLIAM O. BRADY of Sioux Falls

Condensed from the *Bishop's Bulletin**

SOMEONE should hold up a "stop, look and listen" warning to the GI's who wish to marry today and will be at the war front tomorrow. Possibly it is useless to tell persons who are in love that time changes many things and that absence does not make the heart grow fonder. Experience teaches quite the opposite.

In marriage, the ideal is reached when husband and wife are of one mind as well as of one flesh. Then, through the intimacy of the home and the sharing of every hourly experience, they grow in wisdom and age and grace. But many a GI is married only a week or less, and then is sent abroad. This means often not the comfort of someone at home who loves him still, but someone—or two—at home for whom he must worry while the guns roar.

Many a soldier married, marched to war, and came home again, sound in body and in mind. He was devoted as he never was before to a wife who anxiously and loyally awaited him. Many a new wife has found dignity and womanly perfection in waiting for the loved one

for whom she has prayed from her heart. But for all these fortunate, ideal people there are others for whom waiting was no triumph and return no joy.

It is easy for a girl in love to feel that it makes no difference if her husband returns mutilated, broken by war. It makes no difference now. But the reality in the future will make a difference, in spite of love. Men do come back from war broken in mind. They do return to hospital beds for life. They do return completely changed, and embittered. They do come back as strangers to the wife who was sheltered while they suffered, who remained immature while they grew into old men in the stress of warfare.

It is easy for boy and girl to promise each other full fidelity. Then, separated suddenly, the boy finds himself without the comfort of home or wife, exposed to loneliness, anxious for the solace of sex which he cannot have. At first, he looked often at his wife's picture. Now the civilian girl who works with him seems attractive. If she is lonesome, too, or hungry or alone,

*Sioux Falls, S. Dak. May, 1951.

the promised fidelity may be forgotten; and once forgotten, it becomes a promise perhaps more easily broken than kept.

Such temptations are not for the men alone. The new wife at home tries to adjust herself to a new living. She is married, but she has no husband with her. She is attractive, but no one is there to tell her so. She is lonesome, and there is no comfort in the associations open to her. Just in fun, to break the monotony, just for once, she accepts other companionship. But once grows into twice, twice into a dozen social activities, and the attraction of new faces may cloud the fervent

promise of fidelity made on parting.

The love of man for woman and of woman for her husband is a wonderful, blessed thing. For us Catholics, the pledging of a troth in marriage is for life, for better or for worse.

Perhaps you must make a decision soon. At best, you may have a brief home life, shadowed by the certainty of a quick parting, climaxed by a separation the outcome of which is so uncertain. For most persons, it will be much better to suffer the agony of awaiting a GI's return. Then, to come can be a rich courtship, a solemn marriage vow, and a long full life together.

The Open Door

MY HUSBAND and I invited several guests to spend the Christmas holidays with us. We were living near the Arctic circle in Alaska at that time and guests would help drive away some of our cold loneliness.

These guests included a Norwegian surgeon, a novelist, an ex-pugilist and a poet. Though the camaraderie was delightful, we were, nevertheless, a bit homesick. In the midst of our reminiscing we heard the voice of a musher, probably several miles away, shouting the familiar "Mush on! Mush on! Mush on!" to a dog team.

The surgeon said, "That sounds like the Catholic priest! I wonder where he is going this bitterly cold night."

Our dogs in the lean-to, excited by the spectacular display of northern lights and the call of the musher, began to howl their weird wolf cry. We hushed the dogs and, reaching for coats and parkas, hurried outside to wait for the traveler. All was silent, now, except for the creaking of sled runners and the urgent command of the driver. Soon, on the top of a hill, a man muffled in parka and furs, at the handlebars of a sled drawn by seven dogs, was silhouetted

For statements of true incidents by which persons were brought into the Church \$25 will be paid on publication. Manuscripts cannot be returned.

against the aurora borealis. The poet whispered, reverently—"God, what a sermon!"

We hailed the musher and learned that he *was* the Jesuit priest, traveling 25 miles to bring Viaticum to a dying Siwash Indian. Only the poet knew the real meaning of the priest's sacred mission, and knelt in the snow.

Far into the night and early dawn, we discussed that meaning, and learned much from our guest. When, a few years later, my husband and I were received into the Mystical Body, we recalled our first instruction, the wordless sermon depicting the splendor of truth in the Arctic sky.

Rose Roy.

The Open Exit

THE YOUNG Dutch Franciscan, Father Leonides Bruns, was arrested in South China. He was placed in a flimsy jail, under careless guards. He could have escaped easily, but he would not, for fear of drawing down punishment upon the guards or of compromising his Catholic flock.

One night, as he lay sleepless in his cell, through the thin walls he heard himself condemned to death.

Next morning he greeted the servant who brought him food. "I hope you have brought me a good breakfast today. It will be my last."

At noon, he was led through a surly crowd of peasants gathered from the surrounding villages, to face the People's court set up in the open market place. There he was forced to climb upon a table so that all could see him in his "disgrace."

Rapid questions were shot at him.

"Why did you come to China?"

"I came to preach the Gospel."

"That is a lie. Admit you are a foreign spy."

Father Bruns produced his ecclesi-

astical orders to disprove the charge. They were ignored.

"What dealings have you had with Christians and others?"

"I have been here a year," said Father Bruns. "Ask the people what I have done."

Agents in the crowd raised the cry, "Death to the foreigner! Kill the spy."

"I have broken no law in China," replied Father Bruns. "Why do I merit death?"

In answer he was knocked from the table and ordered to strip, but before he could do so, rough hands tore his Religious habit from him. He calmly stepped down and began to take off his shoes.

"That isn't necessary," he was told.

"But I want them off," said Father Bruns. "I want to die as poorly clad as my Lord."

At this, a rain of blows from heavy clubs wielded by strong men descended upon him, he cried out, "Quickly, my Lord. Quickly take my soul to You." *Worldmission* (Jan. '51).

Revolt Cells at Work in Russia

A leader in the Russian anti-communist underground tells what he can of its operations

By CONSTANTINE W. BOLDYREFF

Condensed from the *American Federationist**

SINCE 1930, I have been part of an underground movement known by the initials NTS, whose program stresses freedom for the Russian worker. Our NTS ranks have been swelled since the war. Anti-communists behind the Iron Curtain and refugees from the Soviet Union who are now in Western Europe have flocked to us. Our goal is to organize the forces of Russian freedom. The day will come when the final all-out battle can be won.

Anti-communist resistance inside Russia began in the first days of the Bolshevik regime. Early in 1918, guns and bayonets kept the Bolsheviks from being ousted from the Constituent Assembly in Leningrad's Tavrida palace. Three years later came the famous Kronstadt revolt. It was led by sailors, of whom a large number were conscripted skilled workers. The uprising lasted 16 days before communist troops crushed it.

In 1934 tens of thousands of workers of Ivanovo, Russia's

textile center, made their great starvation march on Moscow. They set off a series of illegal strikes in the Urals, the Don basin, and other industrial regions. Like all resistance in the Soviet Union, the workers' demonstrations were put down by terror and bloodshed.

In all, more than 30 major uprisings have occurred in Russia, several of them led by workers.

We of the NTS are concentrat-



ing on propaganda and organization. We urge on all Russian patriots a silent membership pledge to prepare secretly for the coming battle. We ask them to chalk *NTS* on fences, sidewalks, and buildings in cities and villages of Russia. Thus they make themselves known to other members. *NTS* also stands for the Russian anti-communist slogans, "We Bring Death to Tyrants" and "We Bring Freedom to Toilers." *NTS*, chalked up where the general public can see it, proves the growth of a unified anti-communist force.

Our members are told to avoid open resistance until the time comes for simultaneous uprisings. Meanwhile, members whose identities are often unknown even to underground headquarters, are given a local program. It is carefully planned for minimum individual risk.

Every week our *NTS* agents behind the Iron Curtain distribute thousands of anti-Stalin leaflets to Russian workers, peasants, and Red army men. Our independent radio station, Radio Free Russia, in addition to its regular programs, roams the air-waves, interrupting communist broadcasts with messages of hope and underground instructions for our countrymen. In Western Europe, *NTS* operates special facilities for the relief of refugees from Russia. They are po-

tential revolutionary fighters.

To escape the vigilance of the Soviet secret police, *NTS* resorts to unusual methods. Only a few of these can be revealed now. Sometimes leaflets are distributed by rockets, which appear in the sky over Red army formations or official ceremonies and scatter their messages with a loud explosion. Specially adapted balloons also carry bundles of anti-Red messages.

NTS agents in eight communist-controlled countries were successfully supplied with regular shipments of propaganda materials by floating them down the Danube river. It took Soviet agents a year to discover the secret communication line. They are still in the dark on most of our operations.

NTS radio broadcasts are particularly upsetting for the communists. They try desperately to jam our station, but constant shifting of frequencies gets our signals through. The London *Daily Worker* gave away the communists' worries in a recent squeal of editorial protest against Radio Free Russia.

Some day in the years ahead the Soviet Union will explode. Irresistibly, 180 million Russians will rise up to destroy their tyrants. The rotten structure of communist rule, history's greatest anti-labor conspiracy, will come tumbling down, to be replaced by a new, peace-loving, democratic Russia.



"Mad" American moves the Middle Ages to America

The Cloisters in New York City

By MARY M. DAVIS

Condensed from the *Catholic World**

SOME 50 years ago, a rumor spread that a mad American millionaire was paying \$1 for each carved stone brought to him. French peasants, eager, but skeptical, dug up the stones which held up their grape arbors, chicken coops, and pig sties. They carted them off to the village, and rattled back to their farms in the evening, purses fat with American dollars. They laughed at the eccentricities of American millionaires.

George Grey Barnard was neither eccentric nor a millionaire. He was a sculptor who recognized the superb art of the Middle Ages. But he found it moldering under grapevines or trampled in barnyards. His laboriously gathered bits of marble, sandstone, and limestone started a vogue for medieval art.

Barnard's singlehearted search inspired wealthier collectors. When his own precious collection (he had exhibited it at his own expense) was put on the market, John D.

Rockefeller, Jr., helped the Metropolitan Museum of New York purchase it. Later, in 1930, Mr. Rockefeller provided a setting for it in New York's Fort Tryon park: the world famous "Cloisters."

Barnard, a poor young American art student, went to France to study in 1883. What delighted him most was the magnificent sculpture in great cathedrals. But as he bicycled through the French countryside, he saw with despair the ruins of ancient churches and monasteries.

Their sculpture was produced in a great age of faith by unknown and often itinerant craftsmen. It was the Church's way of teaching, at a time when few could read, the great story of the Nativity, Crucifixion, and Resurrection. It told the prophecies of the Old Testament and their fulfillment in the New. But time, war or iconoclasm had reduced the buildings to mere quarries. Generations of farmers had carted away the stones.

From study of the an-



cient pieces, Barnard had come to love their direct simplicity. He determined to salvage the monuments and, if possible, to bring some of them to the U.S. But Barnard was not rich. In 1903, during a summer bicycle tour in France, he made his first purchase. Curiously, it was not stone! Stopping at a farmhouse to drink, he saw a beautiful wood carving of the Virgin hung over a chicken coop. The farmer was reluctant to part with it. He said the Blessed Virgin protected his flock and helped their laying.

On later holidays, Barnard followed the ancient pilgrim routes: penitential pilgrimages imposed upon Albigensian heretics, or undertaken voluntarily by the faithful. He would locate the original site of a ruined monastery or church. He would patiently visit the neighboring farms, asking children and adults for bits of carved stone. Since he knew that architectural and sculptural treasures often were buried during wars, he watched for stones turned up in newly plowed fields. The corner of one piece of marble uncovered by a farmer's plow, proved on excavation to be a fine Gothic altarpiece. It is now in the Museum of Fine Arts, Boston.

Once Barnard saw some carved stones cemented into the walls of a newly erected building. He bought the building, demolished it, and extracted a precious portal. He rebuilt the building, and gave it

back to its astonished former owner, the village baker. That lovely old doorway is now in the Cloisters of the Philadelphia Museum of Art.

Barnard's main collection is in the New York Cloisters in a setting as isolated as a cloister, yet accessible by subway, auto or bus. It houses, in an imitation monastery, the genuine relics of its prototype.

The Cloisters has a special meaning for Catholics. I could appreciate a remark overheard on my first visit. A visitor, zealously examining a beautiful stone *Entombment of Christ*, said heatedly, "If we would pay more attention to this and less to Plymouth Rock, we'd be better off." To visit the Cloisters is to breathe, for just a little, the rare air of high romance of the medieval Church.

In building it, the Metropolitan attempted the nearly impossible. They wanted to combine the heavy, weighty Romanesque with the lofty, soaring Gothic. In its lofty perch above the Hudson river, the building commands the highest point in the park. The grounds are beautifully and appropriately planted. Its courtyard and drives are paved with Belgian blocks which once formed the streets of Old New York. Here they are a complement to Old-World atmosphere.

After you leave your umbrella and suspicious looking packages in the check room, you may proceed in leisurely and solitary pursuit of

art and religion. I shall not attempt descriptions. The installations are well-labeled and there is an excellent catalogue. But I have favorites. I like the elements from the cloister of St.-Guilhem-le-Desert (from southwest France). Guilhem, Duke of Aquitaine, friend of St. Benedict, founded this cloister in 804. St. Guilhem was a stop in a pilgrimage imposed upon Albigensians. The columns and arches there were built about 1200. A fountain bubbling with water and the scent of delicate flowers bring it alive again at Cloisters.

The Abbey of St.-Michel-de-Cuxa (also from southern France) was founded in 878, and destroyed in 1793 in the French Revolution. It was famous for its saints and the prominence of many of its monks. Its crumbled ruins and a great name are its earthly remains. Around its warm rose-tinted elements the Metropolitan planned the entire museum, even to modeling the bell tower on Cuxa's ruined structure.

Although cloister elements have determined the major architectural lines at the Cloisters, small Gothic and Romanesque chapels provide settings for stained glass and statuary from the two eras. The magnificent tomb of Armengol VII, a Spanish nobleman who founded the monastery from which it was taken, is in the Gothic chapel.

But architecture and stone tombs are not the only treasures. The cele-

brated Unicorn tapestries give a warmth in color which is symbolic of their function of keeping winter cold from drafty castles.

The *Nine Heroes* tapestries have a romantic history. They were made in the 14th century for Jean, Duke of Berry, a great connoisseur and collector of art. They were a pageant of nine heroes, pagan, Hebrew, and Christian. But some bored owner, with highly developed instincts for vandalism or a malicious desire to scramble history, cut up the original three tapestries, and resewed them with comic juxtaposition into window draperies. The Metropolitan has gathered bits and pieces of these treasures, washed them, and united five of the nine heroes and most of their retinues.

A great part of the wealth of any monastery was its treasury of sacred vessels. These were often buried during wars. They are prize relics here. The famous chalice of Antioch, recently acquired by the museum, came out of the earth of Antioch about 1910. It has often been called the Holy Grail, the sacred cup used at the Last Supper, for which many knights, pure of heart, have searched. It is of silver and silver gilt, decorated with 12 figures. Christ appears on opposite sides of the cup, surrounded by ten of the Apostles. It is probably the earliest chalice in existence.

Few Americans have been sufficiently grateful to George Grey

Barnard. If we have not appreciated him fully, the French government has. European governments suspect foreigners who try to remove works of art. But the French government in his case suspended

the law which prohibits their export. In 1920 as a gesture of gratitude it made him a chevalier of the Legion of Honor. George Grey Barnard had made the world again see beauty in medieval art.

Better than Resin

PITCHER JOE KOTRANY of the Wichita club was pitching against the Omaha Cardinals, and was being pretty successful. The Cards and their manager, George Kissell, always on their toes, noticed that Kotrany put his pitching hand part way into his right hip pocket before he handled the ball for delivery.



the Cards picked a particular moment to draw to the attention of the umpire what Kotrany was doing. They wanted to know why he reached into his hip pocket. They stopped the game and asked the umpire to investigate.

That was all right with Kotrany. He held his rosary in plain sight, for all to see.

Biding their time, wise Kissell and

Bob Donaldson in the *Wichita Beacon* (4 June '51).



Better Than Nothing

WITH the baseball season in full swing, the missionary friars make desperate efforts to get close enough to a radio to at least get the scores occasionally. In Latin America, Father Kilian Hazell of Boston is still trying to root his two local teams home, as he has been for the past several years. He writes to say that very often he has to depend on the Spanish sports announcer to keep up with the games. The missionaries really don't mind when the announcer refers to the Yanks as the "Jaankes" and to the Phils as the "Feeleys." But some of the missionaries, who are from Brooklyn, are deeply hurt when the sportscaster calls the Dodgers *perezosos*. In Spanish that means shirkers.

Friars' Fields (June '51).

The amazing life story of the salmon is a struggle from birthplace to sea and back again

Can the Salmon Survive?

By RICHARD L. NEUBERGER

Condensed from the *Eagle**

THE 1950 salmon pack was one of the lowest in history: 190,331 cases. Fishermen consulted records, and saw that 634,696 cases had been packed back in 1894. That peak has never been equaled.

The Chinook salmon is an amazing fish. He can pick out the riffle of his birthplace from among the 10,000 creeks and rivulets which pour into the Columbia river. But odds are against his ever having a complete life span.

Out of every 5,000 salmon eggs, only 50 hatch into baby fish. The rest are gobbled by ducks and Dolly Varden trout, or filched by fishermen. The fingerlings that have survived drift down from the hills to the sea. They may travel 900 turbulent and hazardous miles, dropping over thundering waterfalls.

Countless little salmon cluster off the stormy mouth of the Columbia,

and acclimate themselves to salt water. They cautiously sample ocean shrimp and plankton. They feed ravenously, and then they head for the open sea.

For four years the salmon live in the Pacific. They grow from eight ounces to a weight which may reach 90 pounds. Their living habits during this growth are unknown. They may follow the continental shelf at the bottom of the sea, or they may inhabit the cold ocean reaches off the Aleutians. A few biologists believe they could fatten on aquatic life far below the Polar ice pack, unlikely as that seems.

Herring and crab larvae furnish the food supply for the Pacific salmon. In turn, the salmon are the prey of sharks, loons, and sea lions. But, at the end of four years, salmon seek the entrance to the Columbia. The female is heavy with eggs, the male ripe with milt.

Now begins the



process which will decide the future fate of one of the West's major industries. Can the salmon reach the remote creeks where each of them was spawned?

The perils are many: fishermen's nets and lures, bridge piers, sewage, irrigation and log flumes, debris from sawmills, and chemical wastes from paper plants. To these, a new danger has been added: towering dams of steel and concrete.

Bonneville dam was the first high concrete barrier on the main stem of the Columbia. Army engineers fitted the dam with \$7,200,000 of elaborate fish ladders. Men sit in little doghouse shelters and count the salmon ascending the watery staircases. Their tally makes it evident that the Bonneville ladders have been a success. The fish use them in prodigious numbers.

While adult salmon can thrash through the Bonneville ladders on their return up the river, the tiny fingerlings, going down, have no control over their destiny. They drift with the current. Most of them drop over the crashing spillway, and at least 15% of them die.

A decade ago, Grand Coulee dam was completed. Not even Moby Dick could ascend this 500-foot fortress. Salmon had spawned in the Canadian mountain ranges, back of Grand Coulee. With the dam obstructing their return, a new problem was involved. Biologists worked on the Canadian run. Salmon bound upstream were col-

lected in immense traps. Then they were transferred to aluminum tank trucks and hurried at 50 mph to the country's biggest fish hatchery, at Leavenworth, Wash. In this hatchery, the salmon were artificially propagated. Because the adult fish would die anyway after spawning, no harm was done when they were killed and the eggs and milt taken from them.

The fingerling salmon grew to feeding length in spacious pools at Leavenworth. Once again they went for a ride in the tank trucks, with ice chambers keeping the water cool. At the end of dark gorges, the fingerlings were dumped into tributary creeks which enter the Columbia below Grand Coulee dam.

This was the crux of the project. When these salmon came back from the sea four years later, would they return to their new home? Could they be trained to spawn downstream from Grand Coulee, instead of far back in the Canadian Rockies?

Four years passed. The Leavenworth breed thrashed upstream from the ocean. Their fins had been clipped in distinctive patterns (salmons' fins do not grow back to original shape) to make them readily identifiable.

The experiment worked. The fish swam directly to the creeks below Grand Coulee, and laid and fertilized their eggs. Of course, this involved only a fraction of the riv-

er's entire run. But it showed that such a migration was possible.

Salmon must get upstream. They will spawn only in the rivulet of their own birthplace. After they spawn, both male and female seem content to die. Some reaction tells

them when they have gained this Promised Land. It may be the particular temperature or current of the water. It could be the mottled pattern of the gravel in the creek-bed. It might even be some shadow cast by the hills or canyon walls.

War Notes



A DETROIT MOTHER, having a son in the combat forces in Korea, prayed constantly for his safe return. Feeling the need of a physical outlet for emotions, she bought a miniature church (like those we use for Christmas decoration) and lighting it from within, placed it in a window of her home. She stood one lone little soldier in full battle dress in front of the church.

Then she wrote a letter to her son telling him what she had done, and that she planned to keep the window lighted every night until his return. She would also say the Rosary.

The son read the letter to some of his buddies. They asked if they could be counted in on the prayers, and be represented in front of the little church. Now, 24 soldiers in full battle dress, each with his name on his own little wooden base, stand in front of the church in the lighted window.

Lillie Egan McInnes.



LT. (jg) Cornelius J. Griffin, Catholic Navy chaplain in Korea, was giving last rites to a mortally wounded marine near Chosin reservoir last November, when machine-gun fire hit an ambulance. The chaplain's clerk, Sgt. Matthew Caruso, 20, of Rocky Hill, Conn., died trying to shield Father Griffin.

The priest then was hit, his jaw and right arm shredded, and he thought he was dying. A Baptist chaplain, Lt. Cmdr. H. Craven of Washington, seeing the priest's severe condition, knelt beside him and read the Catholic prayer of contrition.

Associated Press (4 June '51).



ONE night war chaplain Father Duffy was crawling through the trenches during the 1st World War. He came to a dying, agonizing doughboy. He tried to help him; took his torn, bleeding body into his arms and whispered words of spiritual help and consolation to him. The boy opened his eyes and looked, somewhat startled, at the priest. "Father," he gasped, "I do not belong to your Church." The chaplain answered: "I know my lad, but you belong to my God."

The Sincere Seeker.

The man who does something extra gets ahead

You and Your Job

By PAUL W. BOYNTON

Condensed from a book*

THERE are few, if any, blind-alley jobs. There are only blind-alley people. Take, for instance, a workman on a factory assembly line. He twists nuts all day long. That looks like a blind-alley job if there ever was one. But is it?

The workmen have a foreman who was chosen because he was the best man in the line, the most efficient, the one who knew best how to get along with other men, who could shoulder responsibility. He is headed toward a job as superintendent. He had "a job with a future." It did not look like one while he twisted nuts, but he made it one.

Your job can be rewarding. There can be fun in working out the problems that confront you, in learning to handle the people who seem determined not to like you, in figuring out better ways of doing things. The busy person is rarely an unhappy person. He has no time to be.

Have you ever looked at your job from the standpoint of the boss? He is the man who is responsible for making profits for the company

or for his department. Do not feel indignant nor injured when he criticizes you. He is calling attention to your mistakes because he is trying to train you to be more efficient on your job and more useful to him. If he did not think you were worth training he would not bother to criticize. He would get rid of you and try someone else.

Your boss has hired you because he cannot do all the work himself and he needs your help. Obviously, the more helpful you are the more valuable you will be to him. The more he can depend on you to relieve him of his burdens the more nearly indispensable you will become. If he finds that he can rely on what you say as being the exact truth he will have unshakable faith in you. If he discovers that you hedge or lie or, as is more frequent, indulge in half-truths, he cannot have confidence in you.

The chief reason for lack of honesty seems to be boss fear. This often results because the boss is too busy, too preoccupied with his own work, to sell himself to his employees. Boss fear reveals itself in

*Six Ways to Get a Job. Copyright, 1940, 1945, 1951, by Harper & Brothers. Reprinted with permission. 136 pp. \$2.

many ways. Sometimes employers and department heads ask subordinates for opinions on such matters as work methods and plans under consideration. They seldom get an honest opinion. You, the employee, are perhaps afraid to say what you think the boss may not wish to hear. And yet your employer depends on you for information. He has to rely on you to carry your share of the work. If you have any ideas in regard to it, he wants to know what they are. Answer questions truthfully, clearly, expressing your opinion frankly, and give intelligent reasons for it. You will make an infinitely better impression than the timid fellow who fumbles around, afraid to commit himself.

Why is it that the man who wants a competent assistant has to interview 100 men, taking up days of his time, to find one who meets his requirements? Who is the man who gets the job? The one who knows his job and can work quickly and efficiently, the one who is interested in doing good work, not afraid of hard work.

What was the matter with the other 99 persons who applied? They gave the appearance of not being markedly alert, showed a lack of ambition, seemed to be uninterested about what they were expected to do, or were slow and unconvincing in answering questions.

One young man in a large corporation owed his advancement to

a simple thing. A concerted rush to leave the office came at five o'clock each night. The young man was one of the stampeding herd. One evening as he passed his boss's office, he glanced in and saw the boss still at his desk, hard at work. The youngster was thoughtful as he reached the street. The man in the coveted job was still hard at work while his subordinates stopped the moment they were permitted to do so. The next night the boss was again bending over his desk as the employees stormed out. The young man hesitated for a moment at his door.

"I was just leaving," he said, "but I don't need to go if there is anything more I can do."

The boss looked up, mild astonishment written on his face. "No, that's all right," he called. "Go on."

A week or so later there was an unexpected opening in the sales department. A number of employees desired the job, many with years of service. But, to his own surprise, the young man got the job. It went to him for the simple reason that he had offered to do a little more than had been demanded of him.

The person who outdistances others on the job is the one who studies it, learns more about it, trains himself to be more valuable in it.

There is no mystic formula for promotion. You slowly build up a reputation, good or bad; then when the necessity comes for promotion, in general practice three or four

people sit around a table and discuss the matter. If your reputation has been good you stand an excellent chance of being promoted. If, for any reason, it has not come up to expectations, you stand an excellent chance of staying right where you are.

If you are building for the future, do not keep changing jobs. Of course, if you find yourself in a field for which you are obviously unfitted, this advice does not hold. The sooner you change, the better. But, generally, it is best to stick to the job you have. The urge for change does not usually come from a real inability to handle a job, but from restlessness. Sometimes this is the natural result of your first impact with the business world. Actual conditions are not what you

expected they would be. Wheels in business do not turn so smoothly as you supposed. Actually, there is considerable friction even in the best-run establishments. You must learn to accept that fact.

Restlessness also sometimes comes because you did not know about the kind of work you were to undertake. Find out something about the job in advance. As a rule, it is best to hang on to your job for at least a year and a half or two years before deciding on a change. It will take you six months to arrive at even a remote answer to what it is all about. You are likely to spend the next six months in rebellion against a system with obvious imperfections. But stay with that system for 25 years and you will be astonished that it runs so smoothly.

Things Aren't What They Seem

JOHN CULLINAN is a priest; his sisters are nuns of the Visitation Order at their convent in St. Paul, Minn. A few weeks ago, Sister Jane Margaret became the Mother Superior of the Convent. Her sister, Sister Mary Rita, reflecting on the change, was prompted to remark, "A strange world truly, when one calls her brother Father and her sister Mother."

R. V.

JUST before class was dismissed a little girl shouted, "Sister, may I have tomorrow off? My aunt is about to become a mother."

The nun, a little embarrassed, summoned Mary to her desk, and told her to be more discreet. Two days later, on Mary's return to school the Sister received the following note. "Please excuse Mary's absence from school yesterday, her aunt became Mother Superior of her Religious Community."

Mary M. Brophy.

Father and son worked in the same three-quarter beat

Waltz by Strauss

By JEROME PASTENE

Condensed from a book*



JOHANN STRAUSS II was daring the wrath of musical Vienna. He was to appear on Oct. 15, 1844, as an orchestral director under a name already made world famous by his father. Many Viennese thought he was capitalizing on his estranged father's hard-earned reputation, that he himself possessed no musical ability.

But the 19-year-old boy had little choice. The father's desertion of his mother, Anna, and his constantly dwindling allowance from Johann, Sr., gradually forced him to seek work and fame. Young Johann was a more finished musician than his father had been at 19.

Before he could appear, Johann must obtain a license from the Viennese magistracy "to make music for entertainment in public resorts." As a minor he should have the consent of his father. He knew that Johann Strauss, Sr., would never give it. In lieu of it, he obtained warmly worded letters from prominent people.

Drexler, his teacher and a famous

church musician, assisted him. He submitted a religious composition, *Tu qui regis totum orbem*, which the boy had composed, to the licensing board. Thus it was through ecclesiastical music that the future master of the waltz gained his right to appear in public.

Johann, Jr., known as Schani, got his precious license. He began to frequent cafes where Vienna musicians gathered. From among the musicians he carefully chose those he needed, changing them time and again. At last he felt that his group, small as it was, could perform in a manner befitting the name of Johann Strauss.

Schani did his utmost to keep word of his activities from his father. But the news inevitably spread. Newspapers took up the story. The publicity further estranged the two Johanns. There was nothing sensational in the appearance of a new orchestra. But the implications of family discord stirred terrific interest.

The reports agitated the elder

*Three-Quarter Time. Copyright, 1951, by the author. Reprinted with permission.

Strauss beyond reason. He was so upset that he was actually ill for several days before the concert, and even expressed a hope that he would not live to see that day. It may be that Johann, Sr., somehow guessed that after his death his own fame would be overshadowed by his son's.

The forthcoming appearance of young Johann had all Vienna up in arms. The citizens divided into two vociferous and inimical camps. A third group, distinctly in the minority, sat quietly through the turmoil. Their only question was whether Schani could play and compose.

It was to be no quiet, little-heralded debut. Schani was to make his formal introduction to the world of music at Dommayer's, a resort scarcely inferior in elegance to the famous Sperlsaal, over which his father presided. It did not please the older man to recall his own unpublicized debut.

The evening arrived. It seemed as though the entire city had converged on Dommayer's. The crowd began to gather at six; soon all the tables were occupied. But people continued to press past the ticket window. Every inch of floor space was accounted for. Finally it became impossible to wedge another person into the building. Thousands of disappointed latecomers filled the outer square. Johann, Sr., was not present. He had his own concert at the Sperl to conduct. But even without that excuse it is

doubtful that he would have come. However, his close friends, Haslinger and Hirsch, were on hand to shout his son down.

The crowd murmured as Schani appeared. He was truly the son of Johann Strauss. Though a heavier, squarer build distinguished him, there were the same manner, pallor, and burning eyes. But his motions were a little slower, a little more deliberate, without the quick nervousness typical of his father.

Before the concert began, the Haslinger-Hirsch combine made a furious din. Finally, however, the interest of the multitude prevailed. The orchestra was able to begin.

Now the important questions would be answered. Could he play? Could he compose? Young Strauss gave the first answer at once, opening his program with the overture to Auber's opera *La Muette de Portici*, then very popular in Vienna. The Auber overture did not meet with much approval. The small group of 15 players was unequal to a work demanding a symphony orchestra. Yet the musicianship of the leader and his men was apparent. His audience, despite the continued protests of his opponents, permitted him to introduce the first of a group of four of his own compositions, the *Gunstweber Waltzes*, Op. 4. The elder Strauss's faction whistled, hissed, and booed. Even so, the waltz had to be repeated four times; the title, *Seekers of Favor*, had served its purpose well.

Originally, Schani wished to call this set of waltzes *Das Mutterherz* (*A Mother's Heart*). But Frau Strauss told him to change it. She knew that it would further antagonize his father to underline her estrangement from him.

A polka, *Herzenslust*, Op. 3, followed. Again, several repeats were demanded. The *Debut Quadrille*, Op. 2, followed, and finally the *Sinngedichte Waltzes*, Op. 1. There was a tempest of applause. Even the elder Strauss's faction rose to its feet and cheered. The audience called for 19 encores, something unheard of, even at a Strauss concert! Schani had conquered Vienna!

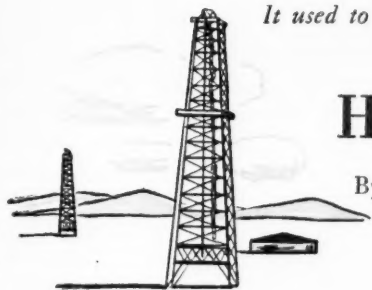
Now he showed his true, generous nature. Had he been his father, he would have dismissed his men, packed his violin, and gone home. Not Schani; he signaled for yet another encore, of another and unannounced work. The audience was quite still. There floated into the hall the magic opening strains of the *Lorelei-Rhein-Klänge*, the elder Johann's greatest waltz. The listeners, touched and moved as only the Viennese can be moved, shed tears and held their breaths as the last note melted *pianissimo* away into the night. When Schani ended this generous tribute to his father, the audience rose as one. Salvo after salvo of bravos echoed into the square and the park. Led by Has-

linger, the elder man's followers, now Schani's as well, rushed upon the stage. They bore the delighted conductor aloft, and carried him to his home. Hirsch, hastening out of the hall to carry the fantastic news to the Sperl, came upon a small woman alone at a table in the fast-emptying hall. Tears of joy streamed down her cheeks. It was Anna Strauss. With tears in his own eyes, Hirsch stopped to congratulate her. He then went on to the Sperl to tell to his friend that, for better or for worse, the world of music now recognized two men by the name of Johann Strauss.

Not long afterwards, a reconciliation took place. Schani was eager for this, for, despite all past misunderstandings, he was both fond and proud of his father. Proud of him, at least, as a musician, if not as a man. Nor was the older man anxious to remain at swords' points with a son who threatened to outshine him. The elder Johann offered him the position of concertmaster and assistant conductor with the Sperl orchestra. It would have silenced much of the vicious gossip that hurt both. But the young man had his own career to make. Having begun it so illustriously, he could not now retire to a comparatively obscure position. He went his own way, but he and his father parted as friends.

THERE'S a lot of good in a lot of people—because
it never has come out.

Indianapolis Times.



*It used to be hit and miss, and now, with the help
of science, it still is*

How to Find Oil

By STEWART SCHACKNE and
N. D'ARCY DRAKE

Condensed from a book*

NOBODY knows for sure who first thought of drilling a well for oil. Most historians say it was a New York lawyer, George H. Bissell. He acquired a tract of land, known for oil seepages, on Oil creek near Titusville in western Pennsylvania. Bissell was an organizer of the company that drilled the first well.

Edwin L. Drake, a 40-year-old retired railroad conductor of New Haven, Conn., planned and supervised actual drilling. He drilled for oil just as he would for water. But drilling a well for oil seemed so strange that the project was dubbed Drake's Folly. As the hole went deeper, Drake had trouble. His fellow stockholders did not share his conviction of success. The well caved in. The solution was to use sections of pipe to line the well. As the drilling progressed, this casing pipe was driven deeper. The use of casing to line oil wells is still uniform practice.

On Aug. 27, 1859, after about two months of drilling, Drake's well

struck oil at 69½ feet. Oil flowed at a rate of 15 to 20 barrels a day. With crude oil at \$20 a barrel, this more than repaid everyone. People flocked into the area. News of the event in a rural town in Pennsylvania spread throughout the world. Almost overnight the modern oil industry was born.

It is said that the practice then was to drill to about 69 feet, the depth of Drake's well, and to abandon the hole if oil was not found. However, it was soon discovered that oil might be found farther down. In the U.S., the wave of oil-seeking spread westward. As time went on, discoveries were made in Ohio, Oklahoma, California, Texas, and other states.

Wherever new strikes were made, towns sprang up. Land was bid for feverishly. Large sums were made almost overnight, and frequently lost as quickly. Subsidiary businesses, such as barrel-making and transportation by the horsedrawn drays, were created.

With true Yankee enterprise,

*Oil for the World. Copyright, 1950, by the authors. Reprinted with permission.

128 pp. \$2.50

59

American merchants not only refined the crude and sold its products at home but within two years were sending barreled oil by sailing ships to Europe and around the globe. American drillers, because of their greater experience, were frequently paid large fees to explore for oil in other lands. The industry gained an American stamp which it has retained. American oilmen, some people say, have "a nose for oil." They discovered most of the world's oil fields. In some cases, particularly in the Middle East, they found oil where other companies had failed.

Sometimes the hardships to be overcome in finding oil, bringing it to the surface, and transporting it to its destination compare to the rigors of military campaigns. In Bolivia, Americans explored 18,000 square miles of steaming tropical wilderness, inhabited only by animals, poisonous snakes, and unfriendly natives. They hacked roads a thousand miles through jungles and over mountains. They made, in all, 35 separate expeditions, costing millions of dollars, before discovering oil.

The same conditions were encountered in Colombia, in parts of Venezuela, and in the Dutch East Indies. Other conditions, equally arduous, had to be overcome in the deserts of Arabia. The Bedouins considered American explorers fair game for kidnapping forays.

Early oilmen usually acted on

obvious signs of oil, such as surface seepages. Often, they worked by hunch. On occasion, they fell back on some of the trappings of superstition, such as divining rods, or on contraptions of varying complexity called doodle bugs.

Meanwhile, experience was aiding science. The earth's composition and physical features had been the subject of man's curiosity from early times, and the science of geology had been developing. However, it was not until 1900 that enough was known to combine the two bodies of knowledge into the specialty of petroleum geology.

Modern techniques of exploring use all our knowledge of oil's origin and its accumulation. We believe, for example, that when oil was formed in the buried sediments of ancient seas, it existed first in the form of droplets widely dispersed in rock layers. With it in the rock was salt water. Along with oil, gas had formed from the same organic matter. Oil, gas, and water will not stay mixed, since oil is lighter than the water, and the gas is lighter than both. The three fluids tend to sort themselves out. The oil and gas work their way above in the rock layers, seeping through porous rock toward the surface of the earth as persistently as a stick will bob up in a pond.

Much oil and gas came to the surface ages ago and was lost. But not all escaped; much was caught

in subterranean traps formed by the buckling and folding of the earth in early geologic time. The traps are of three major kinds. All consist of layers of porous rock covered by layers of nonporous rock. Porous rock into which oil originally moved may have folded upward, producing a subterranean upside-down bowl or saucer. Oil and gas may collect above such an inverted bowl and be held by an overlying nonporous layer.

A second kind of oil trap is formed at a fault, or break, in layers of rock. The rock on one side has slipped up or down so that an uptilted end of a porous layer is thrust against a nonporous layer and thereby sealed.

In a third type, buried sandstone that may once have been an old beach tapers off like a wedge, ending between layers of rock. Here the oil moves through the sandstone until it can go no farther, and collects to form an oil field.

Oil therefore is not everywhere underground. It accumulates only here and there in traps. The petroleum geologist does not look for oil itself but tries to find these traps. They may lie near the surface or miles deep. They may be of almost any size or shape. The geologist exploring for oil patiently scans the countryside. He studies aerial photos for differences in terrain or foliage that indicate differences in the soil and rocks. He looks for outcrops of rock. Such activity has

earned the geologist the nickname of rock hound. He may find his best clues in the canyons and gullies cut by rivers and streams. These gashes often expose layers of rock which the geologist can read like pages of past time. They also tell him which way the layers are sloping.

The rock hound looks for fossils and shells and bones of the tiny sea creatures still preserved in rock that was once the silt floor of the ocean. Some are so small that a microscope must be used. Others may be as big as a man's head. Men who study fossils have classified hundreds of thousands of remains of plants and animals. They are an important clue to the period in which the rock was formed, and reveal whether it is the type in which oil is likely to occur.

But even such information is not enough. Petroleum scientists probe the earth itself. The science of using instruments and interpreting their findings is known as geophysics. Instruments do not tell whether oil exists at a certain place; they merely help to indicate places where conditions favor its presence.

The gravity meter measures the gravitational force of the earth, which is not the same at all points. Heavy rocks exert a greater pull than lighter rocks. Rocks near the surface have a greater pull than the same rocks at greater depth. A man standing over a deeply buried mass of granite weighs a shade

less than if the granite is near the surface. He weighs a little more when standing over granite than over sandstone. With the gravity meter, the geophysicist obtains clues as to both the nature and depth of the rocks beneath the surface.

But the most widely used device for studying deeply buried strata is the seismograph, an instrument for measuring and timing vibrations of the earth. It is the instrument used for detecting earthquakes, and is so sensitive it can record an ant's footsteps. When oil hunters use it, they make a small earthquake by drilling a hole in the ground and setting off dynamite at the bottom. The explosion sets up waves in the earth much like the waves which form in a pond when a stone is thrown. Such waves are reflected most strongly from the

harder rocks. They return more quickly from shallow strata than from deeper strata. And their reflections vary in other ways, depending upon the nature and slope of rock layers. The reflections are recorded by the seismograph as wavy lines on a strip of photographically treated paper to reveal time difference between shock and echo at many different points. Such data, taken over a wide area, help find the folds and faults of strata which may be traps for underground oil.

Scientists have improved the odds for finding oil at great depths and over wide areas. However, they have not made oil discovery a sure thing. They can determine where an oil field may be, but only tapping will prove whether oil is actually there.



Quit Your Kiddin'

"Should I take Junior to the zoo tomorrow?"

"If the zoo wants him, let 'em come and get him."

Indiana Telephone News.



A discouraged salesman wired his home office: "If Stalin wants more territory, he can have mine."

Walter Frank.



An Indian in New Mexico was smoke-signaling love messages to his Indian sweetheart a few miles away. Right in the middle of it, the atom bomb test went off, covering the sky with smoke for miles.

"Gosh," cried the Indian enviously. "I wish I'd said that."

Our Sunday Visitor (20 May '51).

It may be a nuisance but it's also strange and wonderful. Here's what you go through

Don't Duck Jury Duty

Condensed from *Changing Times**



You get a notice to report for jury duty. You are irritated. Your first thought is how to get out of serving.

But have you really got a good excuse? Don't dodge just because you're busy. Everybody's busy. And anyhow, you are likely to find that the summons which may come in a visit from a deputy sheriff, a post card, a registered letter or just a telephone call is the signal for the beginning of a strange and in some ways wonderful experience. You can bet on this: jury duty may be boring. It's almost sure to be physically taxing. But you are bound to find it different from anything else you have ever done.

It is awesome but not unpleasant to know that you and 11 other "good men and true" are holding somebody's fate or finances in your collective hands. Also the ways of justice are fascinating. In the musty atmosphere of the county courthouse, it is exciting to see the ancient traditions of English common law brought to life. As you sit there

in the courtroom, you will perhaps wonder how you, an ordinary citizen, got involved in this complicated machinery. You got mixed up in the system as long ago as 1066. And despite howls that the jury system should be abolished, it looks as if you will continue to be involved in it.

Every state has a different procedure for making up jury lists and drawing jury panels. Generally, however, it works something like this. A jury commission, or perhaps some designated county officer, selects a list of names from the qualified persons in the court jurisdiction. The commissioners must compile their list from the classes of people prescribed by law as eligible to serve. If the statute says that jurors must be taxpayers, they use the county tax rolls. If it says that they must be voters, the poll list is used. Some states specify that jurors must be householders (heads of families) or freeholders (those who possess an estate in land).

The jury commission decides who

*The Kiplinger Washington Agency, Inc., 1729 H St., N.W., Washington 6, D.C. June, 1951.

is fit to serve. They may disqualify you for sickness, being under age (usually under 21), lack of knowledge of the English language, insanity, bad moral character, lack of citizenship, questionable loyalty, or for failure to meet residence requirements. Your occupation, sobriety, intelligence, education, color, race, and religious beliefs are not usually considered.

There are some 70 classes of persons, however, who are exempt from service in one state or another. Among the most common classes exempted are public officers, attorneys, physicians, clergymen, postmasters, firemen, soldiers, the aged, disabled persons, and women. (Eight states still don't permit women jurors.) Recent jury duty on another case is also a reason for exemption in many states. When the jury commission has selected a given number of names, the court clerk copies each name on a separate piece of paper and drops the slips into the "jury wheel." Such a wheel is a revolving barrel equipped with a strong lock. When the jury wheel is filled, the clerk draws out sufficient names to fill each jury panel as needed. The sheriff is in charge of issuing summonses. Once you get the call, your attendance in court (and on time, too) is compulsory. Ignoring the summons can be construed as contempt of court, and you can be fined.

Valid excuses may get you off. It's up to the judge. If you really

Your Role

JURY DUTY, points out S. Ernest Roll, Los Angeles district attorney, is the place Mr. Average American can do most, specifically and directly, to outlaw crime. It can be his answer to the Kefauver report.

In a county like Los Angeles people are busy. It isn't easy to get responsible men and women to serve. Mr. Roll can see why. He likes to garden and raise Doberman pinschers, enjoys being a "joiner," and he could use spare time if he had any. He knows what it means to the wage earner to take time off and get only \$3 a day. He says the numerous big firms now letting their employees do jury duty without loss of pay deserve unstinted praise.

Kimms Hendrick in the *Christian Science Monitor*. (29 May '51).

have a just excuse, show up in court at the proper time, and when the judge calls for your excuse, give it. Too often, employers call up in advance on behalf of workers they suddenly declare they cannot get along without. Such tactics often backfire. If you present an excuse to the judge, be sure it is a good one. Remember, judges hear "too busy" a thousand times a week. Don't use it unless you can back it up.

There are no fixed rules, but there are three generally accepted

excuses. 1. You don't have the qualifications to serve. 2. Your personal welfare or that of your family would be endangered. 3. You would suffer real business hardship. Of course, if you are a witness in the case, are presently engaged in another lawsuit, or are ill, you should be excused automatically.

The routine of handling jury panels varies. In places where several courts are operating, you will probably be empaneled by one judge and serve under another. When you are empaneled you swear to tell the truth to any questions about your competency as a juror. Then, herded by a court bailiff, your panel, which may include from 30 to 150 people, will be put somewhere to await assignment. Finally, the panel is split up, and each group is sent into a courtroom. There the prospective jurymen for each case are questioned.

That will take a long time, so relax. You may be less bored if you know what the lawyers are driving at. Naturally, each attorney wants a friend in the jury box. Each therefore will be scanning your face and clothes for clues. He will try to learn your social position, politics, religion, and racial background to decide whether you will be inclined "fer or agin" him. Clarence Darrow, the noted criminal attorney, liked Irishmen on juries. He said they were emotional enough to imagine themselves on trial. Many lawyers reject writers because they

allegedly have too much imagination. Darrow was wary of pharmacists ("always counting their little pills") and accountants ("too ledger-minded"). Other lawyers "strike" engineers because they're too logical.

Lawyers want jurors with certain weaknesses: easily aroused emotions, the "right" prejudices, minds readily swayed by a good actor. They will try to get one or two strong-minded men who they think will be on their side. Then they will pack the rest of the box with followers.

Arranging for the right proportion works like this. The lawyers on each side have a given number of "peremptory challenges." They can strike that many names without real cause. In addition, the lawyers have any number of "challenges for cause" (strikes the judge allows because the juror proves himself incompetent to serve). If the lawyer doesn't like you, he will attempt to trick or coax you into admitting a prejudice, a monetary interest in the case, previous formation of an opinion, or conscientious scruples against the death penalty. If he can do that, he can keep you off the jury and save one of his peremptory challenges.

If you pass the acid test and find yourself seated on one of the hard chairs of the jury box, you'll be called upon for qualifications the lawyers never ask about. Some of the valuable talents a juror can

have are these. 1. An ability to sit and sit and sit. 2. An iron will that can conquer the craving for a cigarette. 3. A talent for catching on to what the lawyer is driving at the first time he makes a point and an equal talent for stifling irritation when he repeats the same point the 15th time. 4. A stock of good stories to tell during the endless intervals when the jury is sent out of the courtroom. Such times come when the lawyers argue admissibility of evidence or some trial motion. 5. An ability to stay awake after the blonde accident victim has left the stand.

You'll be called upon for more heroic efforts when it's all over and the judge pronounces his "charge to the jury." Judges, leery of making an error, are mighty likely to give this to you in language so splattered with Latin and legalese that you have no really clear idea of what you're supposed to decide. As a jury, though, you 12 can demand that he explain his points so that they can be understood. And you don't have to take more Latin for an answer. Be sure that you know exactly what your job is before leaving the courtroom. Come

back with additional questions if necessary.

After the charge, the jury will be locked up in a small room for "deliberations." A foreman will be elected if the judge hasn't appointed one. Then will come the first discussion of the case, and taking of the first vote. If agreement is not unanimous, the fun starts. Here's where to remember these points. 1. Hold on to your temper. You should not, for instance, treat the decision as a personal contest between you and that stubborn farmer who doesn't go for blondes anyway. 2. Don't put the lawyers on trial; the best lawyer is the one with the best case. 3. It is not cricket to resolve a deadlock by flipping a coin, even if you consider the case mighty trivial.

When and if you reach a decision, the foreman will announce it in court, the lawyers and the judge will thank you, and you can go home—collecting your \$3-a-day (that's about average) as you leave.

You may feel uneasy about your decision, but you are almost sure to feel proud of having made one. You can feel proud, too, that you have not ducked your duty.



Decathlon: Russian Style

WITH Russia coming into the Olympic games, some new events may be introduced: North-Pole vaulting, swinging the satellite, and skipping the parallel.

Toronto Star, Canada.

Once they have financial responsibility, women are more careful than men

Let Your **WIFE** Pay the Bills

By GILBERT M. HAAS

Condensed from *McCall's**

MARRIED couples quarrel more about money than anything else, according to a 1950 Gallup poll. Oddly enough, the reason for the quarrels is not the size of the family income. It's because men do not trust women with money.

Ask almost any man whether his wife is extravagant. Nine times out of ten he'll say Yes. He'll tell you that she buys five dresses to his one suit, pays outrageous prices for hats, and is always getting a permanent wave or a new handbag.

Yet, take a look at a typical couple with a fairly good income. The wife almost always uses buses instead of taxis. When she and another woman eat lunch they split the check, and not down the middle either. Each pays for what she has eaten. Each tips moderately, you might even say stingily, by most men's standards.

Now follow the husband through a day. He eats lunch at more expensive restaurants than his wife does. He tips well. Though far from a problem gambler, he thinks nothing of dropping \$5 or \$10 at poker or on a horse race. But watch

him hold his head when the bills come in!

"One dollar for a pair of socks for a 14-year-old boy! Listen, we never paid more than two bits for them when I was his age."

Because they are traditional wage earners, most men assume that they understand money. If they did understand it, of course, they would not be so touchy about it. Frequently, money is the only means a man has of bolstering up his vanity.

Before he decides to "protect" his wife by handling all the family finances, I suggest that the average husband face a few facts.

Women may not subtract nor add as fast as men, but they are far more realistic about counting pennies. Take the word of the bill collectors. The average woman is more cautious than her husband, more reliable when it comes to meeting obligations. Whenever possible, loan companies like to have a wife as cosigner on her husband's note. As one branch manager put it, "When the wife shares responsibility it takes a lot of the risk out of a credit." And, according to a recent survey, men actually spend

more each year on clothes than women do.

"But suppose you marry a financial flibbertigibbet who's never handled money in her life?" exasperated husbands ask me. My answer is: Give her a chance. She may be a flibbertigibbet because she's always been treated like one.

I remember a friend of mine, Gerald K., who married the pretty but spoiled daughter of an indulgent father. Before marriage she had worked as a receptionist, but frankly admitted that every cent she made went on her back.

After an extravagant honeymoon, Gerald tried to put her on an allowance. She went right on buying as she pleased, in spite of quarrels, tears, and his desperate, "Debby, I can't afford it. You've got to cut down."

Finally, after one particularly violent fight, she swore she would reform. For a few months it looked as though she meant it. Then her father died. The day after the funeral she discovered that her father had left almost nothing but debts. She handed Gerald a folder filled with her unpaid bills dating back past the day she promised to reform.

The next morning Gerald came to see me. I learned that his wife knew nothing about his income. In fact, he had lied to her about it. He wished me to go on lying for him "for her own protection."

The solution I proposed astound-

ed him. I told him that he must start turning his entire salary over to his wife and let her work out a budget, with the understanding that she would have to pay off her debts.

To his surprise, Gerald found Debby not only humble and eager to work out a budget but also sensible. In fact, after she got to managing money she trimmed until Gerald began to call her niggardly. Before the year was out she had paid off all her debts.

That is what frequently happens when a financial flibbertigibbet is given real responsibility.

In two households out of three in this country today the husband clings to the old male prerogative of holding the purse strings. Here are the figures from George Gallup. In 29% of homes the husband manages the money. In 32%, the wife handles the money (the enlightened third). In 39%, husbands and wives "share" responsibility for managing the money.

The quotation marks are mine. For I'm afraid that in most cases the sharing means only that the husband doles out money for the food bills, which the wife pays while accounting to her husband for every penny. True sharing means that both husband and wife agree on what the money is supposed to go for, and then one of them takes the responsibility for seeing that it goes there.

If a man, through some strong

feeling of financial or emotional insecurity, cannot bring himself to put the budget and checkbook into his wife's hands, he should at any rate explain the setup. He should let her have a voice in it, and then work out a fair allowance which she can spend as she wishes. Then the new hat which she buys to cheer herself up will really cheer

her instead of provoking a scene.

However, if a man really wants to put his home on a basis whereby both he and his wife can get more happiness and less worry out of money, he is wise to give his wife the purse strings. It will save him money and will make her a more responsible human being in every way.

No Love

IN THE new China, love is a dialectical dissertation. Wrote a communist student recently to a Hong Kong newspaper, "We are so busy studying, we have no time for such trash as love. On mountain slopes, in fields at dawn among the flowers, under the trees on a moonlit night, small groups of schoolmates argue serious problems. You will never see a boy and a girl pair off to look at the moon or whisper to each other in typical petty bourgeois manner. If enemy special agents try to lure us to engage in amatory affairs, they are quickly rebuffed."

Time (9 April '51).

No Fun

Now even the clowns in communist Hungary must follow the party line. The newspaper *Magyar Nemzet* reports that the program of circuses for the coming season will be different. The biggest change will be in the clown routine.

Said the party newspaper, "The clowns, wearing wigs, giant shoes and loose dress, who stultified the people with their hackneyed and stupid anecdotes, will disappear."

They'll be replaced, said the paper, by "humorous artists who will recite instructive *chastushkas* (four-line Russian rhymes)" that deal with daily problems.

INS from Budapest (26 June '51).

No Nothin'

IN HUNGARY a commissar asked a peasant how the new potato-crop-production plan was coming. "Under our glorious leader, Stalin," answered the peasant, "our potato crop has been miraculous. If we were to put all our potatoes in a pile they would make a mountain reaching to the feet of God!"

"But you know there isn't any God," said the commissar.

"There aren't any potatoes either," replied the peasant.

Pathfinder (30 May '51).

Harpooning the largest mammal is still a dangerous thrill

I Go A Whaling

Condensed from *Ships and Sailing**



By W. J.
GRANBERG

NOBODY had to tell me when the *Nahmint* reached the open sea. The ship practically did an inside loop, and I fell out of my bunk. The ship's foredeck, 20 feet below, was a welter of green water. For my money, we were sinking. I staggered to the wheelhouse.

The helmsman looked like an old submarine hand on a routine dive. Trying to keep my voice, I said, "Kind of rough, isn't it?"

The man at the wheel gave me a small nod. "Well," he said, "maybe a little. But then it's always choppy inshore."

Shore did not seem close. I thought wistfully of the smelly whaling station on the northwest tip of Vancouver island 20 miles astern in British Columbia.

For just a minute I wished I had stayed ashore, but I knew that I would go down to the sea for whales no matter how rough the water, how wild the wind.

Whaling perhaps is the greatest adventure left for men who follow the sea. Ships again are on the hunt for the world's largest animal; three

operate out of Coal Harbor for Western Whaling Corp. For six months of the year they range as far as 125 miles off shore in search of the sperm, humpback, blue, and finback whales. They are modern wooden vessels. The *Nahmint* is 115 feet long, powered with an eight-cylinder General Motors diesel that drives her at 11 knots.

Modern though the ships are, success depends upon the men. I was glad to see Captain Einar Jensen, skipper of the *Nahmint*, when he clumped into the wheelhouse. He took a look at me. My apprehension must have been showing. "Coffee," he growled in a Swedish accent. "Lots of coffee will make you feel like new."

I reeled along behind him to the galley. There Gus Skog, cook, had a breakfast of hot cakes and bacon and eggs set out. That convinced me it was better to be scared than seasick. "When," I asked, "do we start whaling?"

"In two more hours we be out far enough," Jensen said. "Maybe today we get a big sperm for you," he added with a wide grin.

We were more than 50 miles off shore when Captain Jensen ordered a lookout to the barrel, high on the mast. The lookout seemed to have little regard for his life. I did not envy him his perch. It was tracing crazy letters against the stormy, clouded sky.

We were rolling along at half speed, shipping white water across the decks with every roll, when the lookout sang down, "She blows, captain! Off the port bow!"

"Sperm!" Jensen shouted as he caught a glimpse of the spout. He rang for full ahead.

A sperm blows anywhere from 15 to 30 times, and the idea is to get as close as possible before it goes down. The beasts stay down about 20 minutes and can change their course under water; they often throw a ship off the track. The hunt for one sperm whale thus may cover a large segment of ocean.

Our sperm was still on top, but minutes were running out. And a pod of killer whales were cutting across our bow. There were nine; 20 feet or so long, black and vicious-looking as they knifed through the sea.

The ship drove wildly on. Erling Nelson, the mate, was drenched, but he clung to the gun. The killers rushed in savagely, snapping at the sperm's belly. Ribbons of red spangled the water like stripes in a flag. "Those black devils will spook our sperm!" Jensen groaned.

"Steady on!" Nelson roared to

the wheelsman. "He'll dive soon!"

The huge whale was wallowing wildly, thrashing the sea with its tail in a frantic effort to shake off the killers. It seemed certain we would crash into it. In the fury of their fight, sperm and killers were unaware of the greater danger bearing down.

"Stop, man—you'll ram!"

The warning shout of a seaman broke the silence. Still Jensen did not slacken speed, and the ship rolled crazily in the welter of roughly churning water. Nelson stood poised at the gun, bearing it down on the thrashing sperm.

The lookout cried out that the monster was hunching itself to sound. Nelson yelled as he pulled the trigger of the harpoon gun. Every man held his breath, wondering if the ship, its keel, rudder and propeller would clear the diving whale. The helmsman hauled the wheel over hard and Jensen jerked the command telegraph to "Stop" as the ship cleared the beast's flailing tail.

"Line on!" the skipper shouted. "Line on the sperm!"

"No good," Nelson roared from the bow. "The shot was too far aft. He went down too quick and I caught him just forward of the tail."

"Full ahead!" Nelson shouted up to us. "I'll try for another shot!"

The *Nahmint* literally bounded. The winch rattled up the slack and held taut. Nelson loaded the gun

in a hurry and held his sights on the surging monster. We were so close I could see the end of the harpoon in the animal's broad back, far from a vital spot.

Flanking the sperm and closing in for another attack were the killer whales. Nelson bent over the gun, and I saw him settle his heels. Lunging high out of the water, the sperm veered away just as the mate fired. Nelson's shot went wide and the harpoon fell harmlessly into the water.

The mate stamped around the gun, beat the air with his arms, and roared as only deep-sea sailormen can. Grinning at Nelson, the helmsman spun the wheel. The ship heeled around to meet the whale, but the sperm, harassed by the killers, kept turning. Our line to the lone harpoon was taut as a fiddle string. The sea was a turmoil of white water as the sperm thrashed around in the wide circle, rolling and blowing.

The sperm was pulling us in its own circle. If it sounded, we would have to give the beast some slack or lose our tackle.

"Slack off! Slack off!" Jensen shouted to the men at the winch.

But the line was so tight, so heavy with the weight of the whale, that the brake ratchet on the drum would not free. It looked as if we would have to cut the line, or risk riding it out, captive to the whale.

"He's coming!"

The captain's warning cry echoed as the giant whale turned on us. Nelson picked up a harpoon and swung it over his head as though it were a toy dart. It was a futile weapon. His gesture was instinctive against sudden danger.

The massive, blunt head loomed just off the bow. Nelson drove the harpoon down with a wild cry as the whale struck the ship. It was a glancing blow, but the sturdy vessel thundered with it, and the sperm slid by, still blowing and rolling.

"He'll tear rudder and propeller away if he sounds under us," Jensen said.

His voice was calm enough, I thought, considering my feelings. Also, the whale was in a position to leave us stranded in a rough sea. It rolled less than 200 feet away. Then, twisting suddenly, it headed for us again. The helmsman put the wheel hard over as the beast struck. The ship shuddered and staggered.

"There go flukes!" the mate roared, but the whale was about to dive again.

"Cut!" Jensen commanded.

A seaman cut the line with one slash. The force of the blow sent the axe flying. Jensen slammed the telegraph to "Full Ahead" and we swung with the sperm, broadside with it as it sounded. I held my breath and hung on, along with every man in the ship, wondering if we would be disabled.

Nothing happened; we were clear! We ran ahead for about a minute, and then Jensen shut down to wait for the whale to surface.

I'd had all the whaling I wanted. I was sweating, shaking, and thinking long thoughts of home. But nobody else seemed worried.

We rolled in the trough of the sea. The lookout spotted a humpback, but the men wanted the big sperm, its precious oil, and the larger bounty it pays.

"Let the humpy go," Jensen said.

"At least the humpback will draw off the killers," said Nelson.

Then, suddenly, came the spine-chilling cry from the lookout, "The sperm! The sperm! She blows, captain, off the port bow! She blows! She blows!"

The *Nahmint* surged toward our target.

"How far off does he lay?" the impatient mate shouted up to the lookout.

"Good half mile, I say," the man in the barrel replied, squinting against the wind and sun. "Headed west, he is."

Nelson stamped back and forth on the narrow gun platform.

"We'll never make it," he fumed. Then, to the lookout, he roared, "Mind you mark well the course he takes when he sounds!"

Even as he spoke, the lookout shouted, "There go flukes! West by north he goes!"

"He is headed out to sea, that sperm," Jensen said, "and if he gets

away now I'm afraid Nelson will have to send to China for the harpoon he carries."

The mate scanned the sea anxiously. It seemed ages before the lookout sang, "Dead ahead, dead ahead! She blows dead ahead!"

There, only a short distance ahead, the giant rolled majestically. Outlined against the horizon, still standing shakily, was the harpoon Nelson had flung by hand.

"I see my iron! I see my iron!" the mate shouted. He turned to the flying bridge and called his plea up to Jensen on the wind, "Speed, man! Speed!"

The stout little vessel already was fairly leaping as Dan MacLeod, the Scot engineer, urged an extra notch of speed from the engine.

We were 200 feet away, but we were still looking at the sperm's tail, with no vulnerable target.

Jensen laid the helm hard to starboard as the whale veered to the right. Nelson fired as the target loomed up, and the harpoon was lost in a cloud of white smoke. Yells of triumph went up from the deck. The iron struck full in the ram-like head. She was at the end of our line.

"Another iron, another iron!" Nelson shouted as the whale ran with the line. "This devil will need more!"

The gun was reloaded quickly. Jensen rang for half speed and let the sperm run until almost all the cable was out.

"Check him now! Check him!" he ordered.

The grate of steel against steel sent sparks flying as the winch was braked and the slack went out of the line. The whale took on the weight of the ship as the winch slowly turned, drawing beast and vessel together.

High out of the water, fighting desperately to shed the harpoon, the whale now was an easy target. Its length was a good 65 feet: 65 tons or so, according to the whaler's count of one ton for every foot of length.

We were now within 300 feet and still the straining tackle held. I marveled that the mate would even attempt another shot from the wildly plunging bow.

Jensen, eyeing the narrowing alley of water, rang for more speed. He laid the helm over suddenly, and we were aimed at the broadside of the whale's head. With a target as large as an automobile, Nelson pulled the trigger. The heavy harpoon struck its mark squarely and the whale shuddered.

"Another iron in him!" the mate exulted. "That will bring the sperm home to us!"

The whale suddenly sounded without warning, and its gigantic tail was outlined against the sky in black relief.

"He's badly hit," Nelson shouted. "He'll not stay down long."

True enough, the sea ran crimson along the sides of the ship, but

how long the sperm would fight was anyone's guess. The taut line disappeared not far ahead and the *Nahmint* followed slowly. The whale showed no speed at all.

"He's tired," Jensen said. "He'll be up now."

Then, thrashing angrily, the beast broke the surface less than 300 feet away. Jensen ordered the engine stopped to make the whale pull the ship. In one last bid for freedom it pulled at a good five knots.

The world's largest animal makes no sound in its fight for life, no cry when it perishes. When the cable went suddenly slack I knew the chase was ended. A hush fell over the ship as victory came. We viewed the stricken whale with awe.

Quietly we drew alongside. The huge tail was hoisted to the rail and the flukes trimmed so that the towing tug would have easier going. Then the ship's initial, *N*, was carved in the tail. Notches were cut to indicate the number of harpoons that men in the factory must watch for when cutting up the beast, and the tail was let down with a splash.

To keep the animal afloat on its trip up to the factory, compressed air was pumped into it. When there was enough air in the whale to keep it buoyant, chains were slung around to hold it alongside the ship while we ran in to the mooring buoy inside the sound where the tug would pick it up.

His most spectacular victory was won by turning the other cheek

The Fights of Bishop Sheil

By SAUL ALINSKY

Condensed from the *Progressive**



IT WAS 1939. The CIO was young, bursting with energy, surging with wild dreams. A whole new world was coming around the corner. General Motors, Chrysler, U.S. Steel—they were all going down like tenpins before the bowling drive of the CIO.

Chicago, a really tough town, had shrugged its shoulders and sloughed off the CIO. But the CIO kept coming. In Back-of-the-Yards, Chicago's nationally famous jungle, 25,000 Poles, Slovaks, Negroes, Germans, Irish, Lithuanians, and Mexican-Americans were banded together in the CIO. They were heading for the great showdown with the meat packers. Neither side asked quarter or gave any.

Then it broke. News editors shook their heads unbelievably, and asked for a recheck on the story. It was true. Chicago's Catholic Bishop Sheil was going to open the Packing House Workers' last-ditch strike mass meeting. And he would appear on the same platform

with CIO chief John L. Lewis. It would be the first time that a Catholic prelate had publicly appeared with the bulldog-faced labor leader since the beginning of the CIO. The bishop's presence would be taken as a Church blessing of the cause of the workers. It would torpedo the entire publicity campaign of the packers, which said the CIO was a communist conspiracy.

But the fight was for stakes higher than the man on the street dreams about. All the chips were blue, and they were all down. Everything went. If a Catholic bishop had to go, too, it was just too bad.

Yet, after all, he was a bishop, and entitled to a warning. He was warned not to show. His life was threatened. A bullet shattered the window of a restaurant where he was lunching.

On the night of July 16, 1939, the bishop "showed." He showed, even though Chicago police had to clear eight blocks between his office and

*408 W. Gorham St., Madison 3, Wis. June, 1951.

the Coliseum, and a personal body-guard of 50 police had to be assigned for protection. Once there, 20,000 packing-house workers inside the Coliseum, and 10,000 standing outside, took over. They would have torn to bits anyone who as much as looked sideways at their "good Little Bishop."

The Little Bishop made history that night. He did not plead for the peaceful, orderly way of democracy. He demanded it; he fought for it. Alternately praising and scolding the workers, he went on to denounce the meat trust mercilessly. He fought, with all he had, to prevent the strike. He knew the passions of the times and what must happen when thousands of men who earned their living using knives, went to war. And he won. The union won. There was no strike. The democratic process prevailed. The democratic cause went forward.

For days afterwards, the packing-house workers kept saying that Sheil had pitched another no-hitter. They knew the bishop's background. It went back to 1906, when Bishop Sheil, then Benny Sheil, pitched for small, unknown St. Viator college against the University of Illinois, Big Ten baseball champions of the year. Sheil pitched a no-hit victory against a team from which seven members went on to the major leagues. Benny Sheil turned down four major-league offers.

Ever since, he has played against the kind of opposition in which he has had to pitch almost constant no-hit ball. On issue after issue, Sheil has calmly and courageously enunciated and acted in accordance with the most radical doctrine known in the history of mankind: Christianity.

Bernard James Sheil was born Feb. 18, 1888, in a small, poor flat over a coal yard on Chicago's shabby west side. The house was shaken alternately by the horse-drawn coal wagons, with their regular dumping of tons of coal, and the elevated trains. Here Bernard grew up, a laughing, tough west-side kid, who never ducked an argument. More important, he never ducked the fight that invariably followed. His gang called him Benny, and Benny it was ever since.

He worshiped his mother, Rosella Sheil, and he took it for granted that everyone else did, too. Rosella, or Mother Sheil, as she was known to hundreds, kept open house every day and night. That quaking, five-room flat was security and home for those in hunger and in need. There was always a giant pot of boiling coffee, and a mammoth kettle of stew on the wood-burning stove. People were constantly coming in for a meal, and young Benny Sheil never forgot the sight of his hungry visitors.

His father, James B. Sheil, was possessed of an incredible thirst for knowledge, for knowledge's sake.

He was a graduate of Rush Medicine school, yet never practiced medicine. He was a graduate of the Illinois College of Pharmacy, yet never pursued pharmacy. He was a registered certified public accountant, but never professionally audited a single ledger. Why? No one really knew, except that Jim Sheil wanted to know about things, and when he knew he went on to other fields.

Jim Sheil went into the coal-and-ice business. He was Irish, and that was the business for Irishmen. He prospered, and became active in politics. Then one of the Democratic party chiefs sent down the word that a certain businessman in the neighborhood was to be forced out of business for political reasons. Jim Sheil refused to be a party to this action. He told the political bigwig, "You are putting precinct politics above Christian charity." Jim fought ballot stealing. The machine went out to get him. A campaign of political persecution finally succeeded in breaking his heart. Once he turned to young Benny, and said, "Power without Christian charity is truly the devil at work." And Benny never forgot.

Young Benny went to St. Columbkille's parochial school, St. Viator's college and its seminary. On May 21, 1910, Benny Sheil became Father Sheil. He was assigned as an assistant to St. Mel church, and Father Sheil again was back on the west side. Then the 1st

World War broke out, and Father Sheil became a chaplain at Great Lakes Naval Training station.

With the war's end, Father Sheil was assigned to Holy Name cathedral, Chicago. He was given also the additional duties of Catholic chaplain for the Cook County jail. Here he saw human misery at its worst. He walked in many a death march to the gallows. Here he became deeply conscious not only of criminals but of a society largely responsible for their crimes. And once again, Father Sheil did not forget.

In 1924, Cardinal Mundelein of Chicago named Father Sheil chancellor of the Chicago archdiocese. On young Father Sheil's shoulders rested the main burden of administration of the affairs of the largest Catholic archdiocese in the world. In 1926 Father Sheil led in the planning and was treasurer of the 28th International Eucharistic congress, in Chicago. For this he was made a monsignor. Two years later, Pope Pius XI named Monsignor Sheil auxiliary bishop of Chicago.

In 1930, with the blessing of Cardinal Mundelein, Bishop Sheil founded the now famous Catholic Youth Organization of America, more familiarly known as the CYO.

The movement now extends through the U. S., Canada, and Hawaii. Its religious, athletic, educational, vocational, and social-service programs are open to youth of all

creeds and colors: thousands of non-Catholics are in it.

The bishop's interests are translated into numerous projects. He began, and now operates, the Lewis School of Science and Technology, the Master-Eye Dog foundation, two social centers in Chicago; the West Side Community center, and on the south side, the Sheil House; the CYO Boy's camp; the Mercy mission; a special Puerto Rican program; an FM radio station; the Sheil school, and extensive city-wide summer-supervised recreation programs.

Behind all these projects comes the practical question: where do the scads of money required come from? I asked Bishop Sheil that question. "God provides, as He always does," he replied.

However, there are a goodly number of affluent Americans who report, "Well, maybe the bishop's answer is right, but our checking accounts take a beating when he shows up!" One prominent financier told me, "You know, I'm opposed to practically everything that Bishop Sheil represents. I don't like his stands on labor, housing, and lots of other things. I'm not even sure that I like his brand of Christianity. Furthermore, whenever he comes to me, I know it's for just one thing—money. Each year I say to myself, 'This time the bishop doesn't get a red cent.' Just like the last time. Well, he didn't get a red cent; he got \$15,000!"

The bishop appreciates the fact that the way to a man's heart is through his stomach. Once a year the Knights of Columbus give their annual barbecue, with the proceeds going to the good Little Bishop. The take is substantial.

Chicago's Corned-Beef-and-Cabbage dinner is famous. Once a year, in the largest hotel ballroom in Chicago, more than 2,000 dinner guests sit down to a plate of corned beef and cabbage at \$10 a plate. At a long speakers' table sit the city's dignitaries and every sports editor in town. On a platform are the best current entertainers in the stage and screen world, doing their best, for free. As for the audience—well, as Herb Graffis, news columnist, who was acting as master of ceremonies one year, said, "Fellow suckers, now that you are here, the bishop has ordered the doors closed and we will put the gun on you for all you've got."

But ask any newsboy or panhandler who the worst sucker or "softest touch" in Chicago is, and he'll tell you, with an affectionate caress to each word, "The Little Bishop. He's good for a buck to a sawbuck any time, anywhere, and place!"

Bishops are people, and all work and no play would make them dull, too. But even those who play with the bishop find the going hard, for on a golf course the 63-year-young bishop whacks the ball around in the low 80's. Or, if he

is bowling, something is wrong when he bowls under 195.

He loves getting outdoors in sweatshirt, baseball cap, ball, and glove to "throw a few." He still throws a "spitter," saying truculently, "According to baseball rules, all those using the spitball before it was outlawed can still use it, and I am one of those." It is not uncommon to see the bishop's priestly assistants nursing split fingers after "the boss has tossed a few."

The bishop is a wizard at some of the so-called indoor recreations. Once, disturbed over reports of card playing and dice games among the members of one of his boxing teams, he accompanied them on their next trip. It took the kids a little time to start fading the bishop, but they did. In two hours, the bishop had won every nickel they had, and that ended the craps and cards. He returned the money to a chastened group of fighters. The way the bishop can roll 7's and 11's has made some folks say, "You know, if he wasn't a bishop, I'd think—but he is a bishop."

These same fingers are pretty expert on the piano, and he is completely at home with the masters. He loves good music, and his record collection is one of the best.

Driven by a burning passion to help children, Bishop Sheil's search for the causes of juvenile delinquency inevitably brought him face to face with the delinquencies of our social order. He uncovered the

foul sores of a society filled with the pus of prejudice, racial discrimination, anti-Semitism, economic injustice, poor housing, disease, and inadequate medical care. At first he was appalled, then consumed with anger. His capacity for indignation is as deep as his sense of justice and Christianity.

He has never forgotten the incident that took place some years ago in one of his CYO summer schools. A ragged six-year-old youngster regularly attended each daily session, rain or shine, and just as regularly disappeared immediately after being given his free half-pint bottle of milk. One day a curious priest trailed the youngster to a crumbling shack, and found the child carefully dividing the milk into three portions, for his four-year-old sister, two-year-old brother, and a six-month-old infant. For himself, he kept none. When the bishop tells the story, his emotions are mixed between tears and anger. He says, "That boy will always haunt me; and I will stop at nothing to wipe out conditions like that!"

The bishop does not pull his punches on any issue, including the dynamite-laden subject of labor and capital. He is for the guaranteed annual wage, for adequate—and he means really adequate—unemployment compensation, and even more. "The labor union, as a recognized social and economic force, must have a voice, along with capital, in the management of industry. The

time has long since passed when labor will be satisfied with what is left over."

On discrimination, the bishop really swings from the floor. "The Negro has not received a square deal, an honest deal, nor a new deal from white America. Times without number, he has been denied a job simply because he was black. He is not accepted on an equal plane in the drawing rooms of the white group. In some parts of the country his vote is sidetracked by legal tricks. The Negro is denied entrance to many of our educational institutions. Some of these, unhappily, are Catholic. Even where separate educational facilities are provided, the Negro receives second-rate equipment and teaching. He is pushed into undesirable living quarters, frequently indescribably filthy, and unfit for human habitation. How long are we going to continue to give second-class privileges to first-class citizens?"

On anti-Semitism, the bishop has curtly commented, "The only Jew the Gentile need fear is the imaginary one he has created in his own mind."

However, it is not so much what the bishop says as what he does. Just before Pearl Harbor, the bishop, overriding the protests of associates, went unannounced and uninvited to a mass meeting sponsored by a number of groups, such as the Christian Front. Here, in a hall full of hate, Bishop Bernard Sheil for

15 tense minutes denounced anti-Semitism, white supremacy, and every vile lie that had been belabored by a demagogue on the platform. The audience listened restlessly, glaring, seething with hostility.

Finally, he ended, turned, and slowly began to walk out down the center aisle. Suddenly the silence was shattered by a scream of anger. It came from a fanatical old woman who stepped out and blocked the bishop's way just as he was passing her row. She shrieked, "I'm a Catholic, but you, you—you're not a Catholic bishop. God damn you! Nigger lover! Jew lover! A bishop! Ha, ha! Rabbi Sheil!"

Now completely hysterical, she deliberately cleared her throat, and with all her strength spat over one side of the bishop's face. The bishop did not raise his hand to wipe it off. By this time, most of the people were standing on their chairs. A mad roar began and suddenly died. The bishop, with the dignity of immortality, had turned the other cheek! He waited. The old woman froze, as did hundreds about her. Then, as though a sudden chill had gripped her, she began to shake violently. What an instant before had been a mob of snarling faces became hundreds of lowered heads.

The bishop waited another moment, then spoke softly. "Rabbi? That is what they called our Lord." He walked out in silence.

Gathering of the Clans

By JAMES DOYLE

Condensed from the *United Nations World**

SCOTLAND is almost always a surprise to the traveler. All of Great Britain is the same color on the map and the foreigner often lumps all its people together. Actually, nothing could be more misleading. England and Scotland are governed by the same Parliament and pay allegiance to the same king, but you cross an international frontier in going from one country to the other.

The Highland tradition is seen at its colorful best in the summer clan gatherings. These are robust affairs. The Highland games take brawn as well as skill. One traditional event is tossing the caber, which is simply seeing how far you can throw a young telegraph pole. Another is Scottish wrestling, which is seeing how far you can throw a Scot. By contrast, the dances are marvels of grace. The spectacle of a six-foot, 200-pound Highlander going through a sword dance with a ballerina's deftness has to be seen to be appreciated.



The most famous of the individual clan gatherings is the one at Braemar, to be held this year on Sept. 6 on the banks of the Dee near Balmoral. This is the royal residence in Scotland. The gathering always takes place while the king is in Scotland for the grouse-shooting season, and members of the royal family almost always attend.

The music of the bagpipes is an acquired taste, even in Scotland. Most people can take the pipes or leave them alone. Not so the Scot. Roughly, their effect on him, is to intensify any emotion he may be feeling at the moment. In one mood, they evoke a sentimental tear; in another a blood-curdling war cry. The Scottish regiments are probably the only modern soldiers who go into battle with musical accompaniment. The pipes always go first. Their wild strains and the sight behind them of the relentless "ladies from hell" have an unsettling effect on the nerves of the sturdiest foe.

*319 E. 44th St., New York City 17. June, 1951.

Scottish self-control will receive its severest test in modern times this year, when 1,000 pipers march the length of a main street in Edinburgh in the climax of the greatest gathering of the clans in 200 years.

Scots from all over the world will renew their ties with the homeland Aug. 16 to 19. Pipe bands from the U.S. and Canada will be among those marching in the parade.

The last time the call went out for all clans to rally was in 1745, in support of the ill-fated Prince Charlie. This time, Scottish intentions are more peaceable: the clan gathering is in connection with the Festival of Britain. Just what the effect of such a massive dose of pipe music on the turbulent Scots may be cannot be predicted.

But no one who has ever heard the pipes in Scotland has quite escaped their magic. The best place is the misty, mysterious town of Inverness. During the summer, the pipes are always with you there, from earliest morning until the beginning of the eerie half-light that is as close to night as these northern latitudes ever come. Inverness was the capital of the Highlands long before Lady Macbeth had trouble getting to sleep there in 1040 A.D. But it is not strictly a Highland city. Rather it is the point of contact between the Gaelic culture of the Highlands and the tamer Lowland tradition.

In the fall, when its surrounding hills are purple with heather, Inver-

ness is the epitome of Scotland. Inverness boasts, with some justice, that it has a greater range of scenic beauty within a morning's drive than any other city in the British Isles.

Inverness has one distinction of which it is very proud, a rather surprising one. It is famed for the purity of its spoken English. Edinburgh and Dublin are its only serious rivals for the best English in the world; poor old London hasn't got a chance.

A few miles south, in Lowland towns, the story is different. In Aberdeen, the home of the tight-Scotsman myth, the citizens spend much of their time telling each other tightwad jokes in broadest Lallana, Lowland Scots, meanwhile contributing with openhanded generosity to every charity that comes along. Even a native of Edinburgh, only 100 miles to the south, has difficulty understanding Lallana at first. When the visitor hears "Fitter ye ding the nicht?" and realizes he is being asked, "What are you doing tonight?" he feels the warm glow of mastering a foreign tongue.

Every visitor to Scotland should see the ships and the tweeds and the whisky being made. The great liners *Queen Mary* and *Queen Elizabeth* were built on the Clyde in Scotland. In the Hebrides, the visitor will see the same handicraft economy Dr. Johnson saw 200 years ago. Every step in the making of tweed, from spinning yarn to weav-

ing, is done in humble cottages. Even the dyes are made from lichens patiently scraped from Hebridean rocks. Scotch whisky is made with the same loving care in small distilleries in the Highlands. Scotch tastes differ in Scotland, at least in the country pubs. The reason is that the popular Scotches sold throughout the world are all blends of several different varieties, while

the unblended potstill liquor can be obtained only in its native land.

Thus, there's more to the Scot than picturesque dress, picturesque speech, and robust sports. He is one of the hardest workers in the world, although he never lets toil interfere with music and poetry. He is an individualist, and he builds the "Made in Scotland" stamp right into whatever he does.

Country Capers

A MOTORIST traveling in a remote section of the country, stopped to chat with a native who was sitting on a fence whittling.

"How are the roads in this section?" asked the driver.

"Fine," was the native's reply. "We've abolished bad roads around here."

"That was a big job, wasn't it?" asked the motorist.

"Nope," placidly replied the man on the fence. "Wherever the going is 'specially hard, we don't call it a road. We call it a detour."

Dan Bennett in the *American Legion Magazine*.

SMITH stopped his car at a desolate crossroads, and yelled to a farmer driving a load of hay, "Hey, Cornsilk, is this the way to Calgary?"

The farmer looked up in feigned astonishment. "By heck, stranger, how did you know my name is Cornsilk?" he asked.

"I guessed it," said the motorist.

"Then, by heck," said the farmer, as he drove on, "guess your way to Calgary."

Arkansas Baptist.

IT had taken the entire morning for Zeke to tow the tourist's car down to the settlement. When he finally returned home with his weary old mule, his wife asked, "How much did you charge that city feller for towin' him?"

"Fifty cents," Zeke answered. "I guess it wasn't too much. Leastwise, he didn't kick up no fuss."

"Fifty cents! I swear, pa, sometimes I wish you'd do the pullin' and let the mule handle the executive end of the deals."

Capper's Weekly.

*The cross, the spear, the dice are all to be found in this
curiosity of nature*

The Crucifix Fish

By N. J. BERRILL

Condensed from a book*

THROUGHOUT centuries the Passion of Christ has dominated the thought of the Christian world. The cross has been symbolized by man in the stars, in the passionflower, and in the skull of a catfish.

You may have seen such a skull, belonging to the bewhiskered fish that frequents the muddy mouths of rivers where they enter the sea. It is a skull that has been known in many eras, by native Christians who have venerated it, and by the Spanish and English sailors who found it in the days of the Spanish Main. I came across it around Pamlico sound, near Beaufort, N. C.

The underside of the skull, which is the roof of its owner's mouth, has a bone structure which looks like a crucifix, complete with a figure outstretched on the cross and halo behind its head. On the top side, there are bones shaped like the spear and breastplate of the Roman soldier. When the skull is shaken, the "dice" are heard to rattle, like the dice the soldiers cast for our Lord's garments. Other eyes, those of the 17th century, saw

the figure of a robed monk, with outstretched arms, in the bones of the upper side. The "dice" are the pair of earstones lying within a bony box on each side of the hind brain and serving for balance, not for hearing. All fish have them.

The "halo" is made of several small bones. They were long ago described by Max Weber, 19th-century German professor. From him they were named the Weberian ossicles. The bony ossicles link the wall of the air bladder to the back of the air sacs, and the vibrations pass through. Apparently, catfish signal to one another by voice.

When we look at the top of the skull the robes of the monk seem to be the large, heavy plate bones protecting the brain and sense organs. They are so strong that it is almost impossible to kill a catfish by a blow on the head. The breastplate bone is a little different. It serves to protect and fasten the powerful neck muscles that give the fish its strong swimming power. It also serves to guard the mechanism of pulley muscles that operate the dorsal spine, for such is our "spear."

*The Living Tide. Copyright, 1951, by the author. Published with permission of Dodd, Mead & Co., New York City. 256 pp. \$4.

This spine can be raised or lowered by the action of the muscles passing down the back of the skull, and a "nail of the cross" acts as a stop to prevent it from tipping too far forward.

The sea catfish ranges as far north as Cape Cod, but is particularly common along the South Atlantic and Gulf coasts. It is surprising that we have taken so long to discover so little about it. That indefatigable investigator, Dr. Eugene Gudger, now curator of fishes at the American Museum of Natural History, took many years to discover the facts of catfish life.

Nothing is known directly of the feeding habits of the sea catfish in its natural state. The feeding grounds are in water too muddy or deep to see through. In large aquaria in the marine laboratory at Beaufort, Gudger observed sea catfish swimming about with their long barbels just touching the bottom. When something edible was touched, there was a quick turn, a sudden opening of the cavernous mouth, and the morsel was gone. If bits of oyster were dropped into the aquarium and touched by the whiskers of a young fish, the fish would stop in full flight, and even turn a somersault to get at it. Dr. Gudger started looking for eggs and embryos, a search that lasted through springs and summers of six years.

He knew that fishermen believed that "the sea cat spits its young

out of its mouth," and that when the fish are struck on the head or thrown into the boats, eggs fly out of their mouths. Early in the year he caught some females which still had their eggs within the ovaries. In mid-June, spent females were taken with no eggs either in ovaries or anywhere else. The breeding season was starting.

A few days later, fishermen went to the Narrows of the Newport river, where the river proper enters the estuary. The tides there swirl around the oyster reefs at the edges of extensive mud flats, gouging out deep holes. When the mud-flat feeding grounds are laid nearly bare at low tide, the catfish congregate in these holes waiting for the water to return. The fishermen took a big catch and with it the first definite information about what happens to catfish eggs.

About 300 eggs were obtained, all from the mouths of males. To make sure, the fishermen stood in the net in water and mud up to their waists, to keep the lead line on the bottom. As the net came in, each fish was grasped just back of the head and in front of the great spine, to keep the mouth shut and to prevent the eggs from being lost.

Dr. Gudger concluded that a male catfish less than two feet long may have to carry as many as 60 marble-sized eggs, four-fifths of an inch across, in its mouth for two months. During all this time the male eats nothing, but keeps a

strong stream of freshening water pouring in through his mouth, across the eggs, and out through his gills.

Even when the eggs hatch into two-inch fish, they remain at home, skating across the floor of their father's mouth. Only when the babies are four inches long are they permitted to leave. The only thing I can think of that might be worse than keeping a bag of marbles in the mouth for a month or so, is having to refrain for weeks from spitting out several dozen healthy and vigorous fingerlings.

Dr. Gudger suggests how the habit came about. Catfish which live in fresh water, their original home, scoop out a nest in the bottom gravel, and deposit the eggs in it. The male stands guard, and every once in a while takes the eggs into his mouth and spits them out again, to clean them of mud and debris. Even moderately large eggs are in constant danger of suffoca-

tion unless a good stream of water flows over them.

When lake and river catfish descended to the sea, it became necessary to pay still more attention to the eggs. Large eggs spawned on sandy bottoms would be quickly eaten by the voracious blue crabs, and no catfish, however determined, could keep vicious, hungry crabs at bay for weeks on end. Nor could the eggs be laid on the muddy bottoms where the breeding fish are usually caught. They would sink into the mud and be smothered. No, the problem had to be met in some such way as it actually has been: the eggs had to be carried in the parent's mouth.

So the crucifix fish stick to their murky salt-water mud flats and do the best they can to raise a decent family. Catfish eggs are the largest in the world; and after all, if the female can produce as magnificent fish eggs as these, the least the male can do is take care of them.

Between the Goal Posts

THE pint-sized coach became indignant at the big fellow's forgetting the signals and spoiling the plays. "Son, if I were as big and strong as you," said the coach, "I'd be the heavyweight champion of the world."

"Mebbe you're right, sir," slowly drawled the giant freshman, "but what's stoppin' you from being the flyweight champion?" Bob Hansen in the *Eagle*.

A REPORTER boarded the train carrying the Notre Dame team to the last Southern Methodist game. To get a new slant on a story, he asked for the student manager. "I understand," he said, "that you carry a chaplain to pray for the team. Would you mind introducing me to him?"

"Be glad to. Which one do you want, the offensive chaplain or the defensive?"

KVP Philosopher.

You Can Be Popular

By JOSEPH ARCHER KISS

Condensed from a book*

I WAS helping a manufacturer clear out an office one day. Mingled with the customary toilet articles and pencils in one stenographer's desk were some booklets of a course on personality building. I was eager to see this young lady who was so ambitiously trying to make her world over. Next day I met her, talked to her, and studied her. She was charming when you made her talk. She was bursting with good ideas, hopes and aspirations, but these were suppressed because she was too timid. So she bought a course which could only identify what she already had. She merely needed to put all her thoughts into action.

People saw only potential popularity in this young lady. She suffered from inertia. She dreamed of being popular, but her only reaction was study. All the study in the world will not take the place of action—of such remarks as "My, what a lovely dress! Blue looks so good on you," if spoken sincerely.

Popularity will not come to you by accident. You win it with char-

acteristics which people like. It is due to a bristling personality. Everyone detects such a personality instantly and clings to the bearer.

Never withhold a compliment. Never suppress your enthusiasm. Never be neutral in your personality. Build yourself into such a genuine type that everyone will know just what kind of person you are, and will like you for it. You cannot win the love of all people; but by being a Yes and No man or woman you repel friendship. Don't be stubborn. If in a discussion you find you have taken the wrong slant, admit your mistake and show your enthusiasm for the other fellow's viewpoint. You will find them saying of you, "Well, he has definite ideas but he isn't afraid to admit it when he's wrong." That is a signal compliment to you, for it started with your compliment to a friend's judgment. People like to have you agree with them.

When you pay attention to other persons you subtly compliment them. There is nothing worse than being ignored in a group. When

*This abridged article is from the book *It's All In Your Mind*, published and copyrighted by the Reilly and Lee Co., Chicago 10, Ill. Copyright, 1941. Reprinted with permission. 256 pp. \$2.

Know Thyself

Popularity requires a recognition and analysis of the things which you are. If you are not popular, there is a reason. Ask yourself these questions, and write down your answers.

1. Do you take an interest in persons you meet or do you use your friends as a sounding board for your orations?

2. Does it hurt you to hear of a friend's success?

3. In a group, must you always top the other fellow's jokes?

4. Do you read enough to talk intelligently?

5. Do you enjoy sitting in a corner feeling sorry for yourself because no one pays any attention to you?

6. Do you try to make others happy with little attentions?

7. Can you speak with interest, dress with propriety, and act with discretion without making the effort apparent?

8. Are you as hospitable to others as you would like them to be to you?

you feel that you are being ignored, find someone else to pay some attention to. Never be afraid to start a conversation. Chances are the other party is as eager as you. Conversation, then, is a vital factor in building personality.

The greatest aid to conversational

fluency is to go places and see things. Even if you cannot travel, you can read. We have enough condensed magazines today so that no one need ever be without a comprehensive knowledge of what is going on.

I knew an old man who could talk fluently about almost any subject you brought up. You would think he had been everywhere—seen everything. Yet that was definitely not the case. When he read about a certain plane making a record trip, he got library books and studied the details of planes of that type. When he read a news item about Libya, he would go to his atlas and study the topography of the country. He also studied the country's history and background. If something occurred near by, he planned his week-end to go and see it. If there was a train wreck, you could be sure he'd be at the scene as soon as possible. If the local zoo got a new, strange animal, he would also see that. And he would be fortified with plenty of information about it. His life is exciting. He goes as far as he can in person and continues from there through books, newspapers, and maps.

People listen to such a man, for he has something to say. Even listening is an art that makes the listener wanted. Bruce Bliven wrote in the *New Republic* about two kinds of conversationalists, "those who listen to what the other person has to say, and those who use the

interval to plan their next remark."

There are some who think that money provides popularity. It does not. Those who are surrounded by pseudo friends because they are eager to provide these friends with some of the things money will buy can easily detect a false ring to such friendships. The very thought of paying for popularity destroys its true worth. Friends are more important than money. In fact, if you have enough friends you can always borrow money and, paying it back, still have friends. Most of the forces which will sell you to the world will cost you no more than conversation. The things you say will show your state of mind, and your state of mind is what concerns the world.

Here are three things people want and which you can supply.

1. Confidence. Even successful people want someone to tell them that they are getting on. A few words showing that you have faith in a person will endear you to him. And surely, if one is trying to get somewhere, wouldn't you be telling the truth if you believed in him?

2. Understanding. Understanding is usually interpreted as "agreement." Folks want their ideas and plans endorsed by others. They want that more than advice, although they will often ask for advice instead. Try to look at the situation from the other fellow's standpoint and try to be impersonal. If you can ever say, "I think you're absolutely right," don't miss a chance to say it. A single sentence may win you a lifelong friendship.

3. Encouragement. Remember that a pat on the back may be all that is needed to change failure into success. You can aid by simply saying something encouraging. It costs you nothing and you, too, will feel the thrill of encouragement on the rebound.

Above all, remember that you will have to earn popularity by your own way of living. If you prefer a certain theater, or store, it is because you have specific reasons for your choice. Popular persons provide an abundance of reasons why others should like them. Popularity has its price, but everyone has the means of paying it.

Medical Experience

THE old doctor had never refused a call, from rich or poor, but now he was tired.

"Have you any money?" he asked the midnight caller. "Certainly," replied the man on the other end of the phone.

"Then go to the new doctor. I'm too old to get out of bed for anybody who can pay for it."

United Mine Workers Journal.

The beginnings of the greatness of Britain were made by her Catholic kings

The Building of Westminster Abbey

By H. V. MORTON
Condensed from a book*



I HAVE always found it difficult to pass Westminster Abbey, and have spent more time there idling about, or just sitting and looking at the old building, than I care to admit. The other day when I was in the abbey, I tried to remember how many great occasions I have attended since the end of the 1914 war. The first was, I well remember, the burial of the Unknown Soldier. All those who had lost a son or a husband in that conflict felt that, if the Unknown Soldier were not their own son or husband, at least some part of him was there in the middle of London.

To me the service appealed particularly because I had just come from Dover, where I had seen a destroyer steam into harbor with the coffin of the Unknown Soldier upon her deck, draped in the Union Jack. It was a profoundly moving experience to be present in the abbey and to see King George V, in his field-marshal's khaki, standing there as chief mourner as the remains of this ordinary British Tom-

my—did one know him? had one ever met him?—were laid to rest among the immortals.

I remember the marriage of the present king and queen, and I was in the abbey when they were crowned. Suspended, as it were, above the sanctuary, with an almost baroque disregard for the law of gravity, I gazed down a precipice of stone and saw, in a blaze of light in the center of the church, an almost incredible blossoming of the past.

The last ceremony I attended in the abbey was the marriage of Princess Elizabeth to the Duke of Edinburgh, but, between such royal occasions, I have been to dozens of services of various kinds. I think the most melancholy event I can remember in the abbey was the memorial service to Mr. Neville Chamberlain during the war. The windows of the abbey had been blasted by bombs, the church was unheat-

ed, and the members of the cabinet, headed by Mr. Churchill, stood in their overcoats, cold, miserable-looking, and a prey, it seemed, to overwhelming anxiety. The final touch was delivered by the air-raid siren.

But of all my memories of Westminster Abbey none remains more firmly in my memory than a visit I paid one night during the war, before the air raids had begun. It was a bitterly cold night at the end of January, 1940. I happened to be passing the abbey in the blackout, and stood for a moment impressed by the enormous Gothic silhouette against the sky. I had heard that the abbey authorities, clergy and vergers and others, had banded themselves into a complete defense unit to preserve the church in the event of air raids, and I thought it would be interesting to go in and see what was happening. I was delighted to find that my old friend, Mr. T. Hebron, the registrar, was the chief warden. He had 27 wardens under him, 36 fire-fighters, and a first-aid party of 14. About 100 people live in or about the abbey precincts and spend their lives in attendance on the church: dean and chapter, choir, vergers, the registrar and his staff, the clerk of works and his.

All these people, quite a few of them unknown to each other in times of peace, were now drawn by the danger in which the abbey stood into a close community, as

if the abbey were once again a self-contained walled monastery ruled by its abbot. It was obvious that if the abbey were bombed or set on fire the only persons to defend it were those who were intimately acquainted with the intricacies of the building. No outside firemen nor wardens would have been of much use there.

The mental journey into the remote past which visitors are expected to take who visit such a shrine as Westminster Abbey is exhausting; and I often wonder, as I watch the crowds listening to the mass of dates and names given to them by guides, how much is really absorbed or understood. I wish there were some magic formula to make a place like Westminster Abbey immediately thrilling and exciting to its visitors, but there is no such formula.

The history of the abbey is really a simple one, but it is a long story involving 13 centuries. It begins before history, in the age of legend, when monks seeking a lonely spot in which to worship God penetrated the brambles of a little island on the banks of the Thames called Thorney. There they built the church of St. Peter, which has grown into Westminster Abbey. England was half pagan and half Christian. Shaggy kings were being converted by Roman missionaries beneath oak trees, and baptized in the water of holy wells. Sometimes they remained Christian, sometimes

they strayed back into paganism.

The monastery of Westminster first clearly steps into history with Edward the Confessor about the year 1042. This monarch was destined to be its real founder, and his bones are now the abbey's most treasured possession. Edward was almost certainly an albino. His snow-white hair and beard and his long, thin, transparent fingers seemed to his contemporaries to place him in a category apart from ordinary men. He was godly and pious, and was subject to long fits of abstraction and to sudden bursts of disconcerting laughter. The other side of his character was violent, spiteful and cruel.

Before he came to the throne he took a vow to make a pilgrimage to Rome; when he became king he found it impossible to fulfil this vow, and sent a deputation to the Pope asking for absolution. The Pope agreed to absolve him if he would rebuild the monastery of St. Peter. This great task became the main object of his later years. He was half English and half Norman, and his sympathies seem to have been entirely Continental. He surrounded himself with Norman favorites and appointed Normans to positions of chief importance, thus softening up the country conveniently for the arrival of William the Conqueror. It was therefore natural that when he decided to build a great church, he should have introduced for the first time into Eng-

land the massive and splendid Romanesque architecture which was fashionable on the other side of the Channel. It took 20 years to build, and was intended to last forever. The Saxons, whose churches were mostly small stone barns with thatched roofs, after the style of the Celtic churches of Scotland and Ireland, must have looked at the new abbey with amazement and have seen in it something colossal and alien.

The great church was to be dedicated at Christmastide in the year 1065. Edward was ill. For some days he lingered, rallied, and finally sank, and in the consternation which spread through England when his death was known may we not see the first glimmer of that awe and reverence which was to grow into the cult of St. Edward the Confessor?

From London and from all the villages around crowds packed the new white Abbey Church of St. Peter to see the Confessor lying in a blaze of candlelight before the high altar, his crown upon his head, his royal vestments upon his body, a golden crucifix round his neck and a pilgrim's ring upon his long, transparent hand. While the Confessor lay dead in Westminster, his successor, Harold, was hastily crowned, and when Christmas came round again Harold lay dead, and William the Conqueror was crowned in the abbey on the tomb of its founder.

From that moment every king of England, except Edward V and Edward VIII, who were never crowned at all, has been anointed and crowned in Westminster Abbey. Many lie buried there. Although the abbey was built to glorify St. Peter, it is Edward the Confessor that, quite early in its history, it began to glorify, and his tomb became the heart and center of the church, as indeed it is to this day.

In life eccentric, unreliable, childish and inept, in death the Confessor became the symbol of England. Probably at first the Saxons, suffering under foreign rule, began to glance back to the days of the saintly Edward and to think of them as "the good old times," bestowing upon them that golden halo of perfection which is the compliment an unhappy age pays to its predecessor. And the Normans, instead of stamping out the legend of Edward, encouraged it for dynastic reasons, so that conqueror and conquered joined hands in Westminster Abbey at the tomb of the Confessor.

It has been the object of all kings of England to establish some contact with the far-off Saxon Edward. At the solemn moment of their lives, when they were anointed and sanctified, they assumed for a few ritualistic moments the carefully preserved and treasured relics of his wardrobe. His ancient mantle was placed upon their shoulders. Plan-

tagenet monarchs, standing barefoot in the great church, drew on antique garments which were said to be the buskins, or trousers, of the Confessor, and placed their feet in his shoes. If their hair were ruffled by the anointing, it was with Edward's comb that they smoothed it into place. And the final moment came when upon their brows was placed the gold circle of his ancient crown.

Thus dressed in ancient garments that had come down from Saxon days, the sovereigns of another age and time, went to the shrine of St. Edward after the ceremony and were solemnly divested of their clothing, which they left upon the altar. Then, wearing new and modern dress, and carrying only the scepters (which had to be returned to the abbot of Westminster after the coronation feast), they went on their way, having kept a strange appointment with the past.

That Edward should have rivaled St. Peter in St. Peter's church is fantastic enough, but the time came during the Middle Ages when he took his place as a national saint beside St. George. His legend is so powerful that few Englishmen today would not admit that in their minds Edward the Confessor is a kindly, bearded, patriarchal and essentially English figure, infinitely more appealing than that of the official national saint who slew the dragon.

Edward's body was seen at least

three times after his burial, and his bones were disturbed twice. He was first seen in 1098, about 30 years after his funeral, when Henry I, in order to prove the story that the body was incorrupt, ordered the tomb to be opened. It is said that the Confessor was seen lying, as if in life, and Gundulf, the bishop, plucked from his colorless beard a long, pale hair. The second time was after Edward's canonization in 1161, nearly a century after his death. This time the tomb was opened in the presence of Henry II and Thomas à Becket. The ceremony was performed at midnight in October, when, in a blaze of candlelight and torches, the king and the assembled clerics gazed with awe upon the features of the Confessor. He was lying crowned and vested, as he had been buried, and they took the coronation ring from his finger and, removing his vestments, replaced them with others. He was seen again in 106 years time, or 200 years after his burial, and in vastly different surroundings. The massive Norman abbey that he had built had vanished. It had been rebuilt by Henry III, and was the abbey we know today. In this different scene, and before the gaze of men remote from him, the Saxon king was again exposed to the light and was deposited in the place where his bones rest today.

During the Reformation, in the time of Henry VIII, they were again removed, but when Mary

ascended the throne she replaced them in the shrine. The last occasion on which the tomb was disturbed was the most extraordinary of all. The story was told by James II to John Evelyn, and is to be found in his *Diary*, under Sept. 16, 1685. The king said that when they were taking down the stands after his coronation in the abbey, a member of the choir saw a hole in the Confessor's tomb, into which he thrust his arm. He could feel bones there and among them something hard and metallic. He pulled out of the tomb a jeweled gold crucifix attached to a chain.

Realizing that he was holding a precious and sacred relic, the man became afraid, and put the crucifix back in the tomb. Then, later, when it occurred to him that someone else might go there and steal it, he returned and took it out again, and, at the earliest opportunity, showed it to the Archbishop of York. The crucifix found its way to James II at Whitehall, and the king kept it.

From a description printed in 1688 it is obvious that the crucifix was an enameled and jeweled reliquary of Byzantine design. The cross was about four inches long; had on one side, in enamel, a picture of the Passion, and upon the other a picture of a Benedictine monk in his habit. The chain was 24 inches long, the links oblong, and where it joined the cross was a solid circular knob of gold round which hung six gold beads.

It was evidently the loss of this precious object which upset James II so much when he was robbed at Faversham during his first attempt at flight from England. What happened to this relic of St. Edward? Did the thieves melt it down or destroy it, or did it fall into the hands of someone who preserved it, and, if so, does it still exist today? No wonder it is difficult to pass an old curiosity shop! Is it beyond the bounds of possibility that someone might still find a crucifix that had been buried in Saxon England with the Confessor and stolen from a king of England in a Faversham inn 600 years after?

Henry III, who pulled down the vast Norman abbey of the Confessor and built the Westminster Abbey of today, was one of the most extravagant of English monarchs. He was ably assisted by an equally extravagant, but charming and elegant queen, Eleanor of Provence. Henry was also highly intelligent and was the greatest builder, and perhaps the greatest lover of the arts, who has ever occupied the throne.

He was of average height, muscular, and had a drooping eyelid which partly concealed one of his eyes, a curious defect which he handed on to his eldest son, the great Edward I. His piety was such that when he visited the king of France he stopped so long and so often to hear Mass on the way that even St. Louis, in a desperate at-

tempt to speed him up, ordered all the churches to be shut.

The age in which he lived was a tremendous one. It was the age of Dante, St. Francis, St. Dominic, Roger Bacon, Buonaventura and Duns Scotus. Architecture, casting aside its solid Norman anchors, had found wings. It was the age of exquisite churches. The greater part of the talent, skill and inventiveness now scattered among a thousand professions and trades was concentrated within the church. When people look at a church such as Westminster Abbey and say, as they so often do, "How on earth did men do this in those days?" they should reflect that a large part of the total genius of a nation went into these buildings.

The age was also one in which men were thinking of their own homes and their own countries. The crusading fires were dying down. The energies of Europe were no longer scattering towards Palestine. A new class was beginning to rise. There are said to have been 15,000 scholars at Oxford in Henry's reign, who lived how and where they could. It was Henry's chancellor who established Merton college, in which they could live and be disciplined, and so founded the true collegiate system of the English universities.

It was clearly an age of transition. A new world was being born in which, in England, the Abbey of Westminster was to be a signifi-

cant landmark. It is curious that Henry III—the son of the evil, excommunicate John—should have been the pious instrument of fate. His greatest sin in contemporary eyes was his excessive fondness for foreigners, yet, so inscrutable are the workings of destiny, he was the king who erected the national shrine of England. Although he did not know it, Henry was the first truly English king. His devotion to the Confessor was such that he named his eldest son after him, and so began the long run of eight royal Edwards.

This Henry was the first king who, apart from reasons of state, was genuinely proud to trace his descent back to the days of the Saxon saint. All this was a sign, so obvious now, so hazy then, that England was ready to be born. Indeed, it almost seems that Edward the Confessor had himself appointed the hour and the man. When the Confessor lay dying in the year before the Conquest, he had spoken of the "branch engrafted in the green tree," words which, to those around him, seemed to be delirium, but were probably a reference to the future union of Saxon and Norman, a union whose splendid child was England.

When Henry III began to pull down the Confessor's massive abbey in 1245 he was 38 years of age, and 24 years later he had the satisfaction, when he was 62, of seeing

his splendid new church complete, except for the western part of the nave. During the 24 years the king personally supervised the building. He mounted the scaffolding and discussed the plans with Master Henry, the architect, and with John of Gloucester and Robert of Beverley, who succeeded him. So he created what he intended to be a worthy shrine for the Confessor, whom in so many ways he closely resembled, and also a royal mausoleum for the House of Plantagenet.

What would Henry III have said could he have foreseen a day when not only Plantagenets, but Tudors, Stuarts and Hanoverians would be grouped round the Confessor's shrine, when Englishmen of genius and worth, poets, artists, musicians, writers, statesmen and inventors, would be admitted to the church; a day when pilgrims would come from all parts of the world to stand for a moment in the one place above all others which enshrines the genius of the British race?

Borne aloft upon the shoulders of the king, his brother and his sons, the body of the Confessor in a new coffin was carried to its exquisite resting place in October, 1269.

Three years later, Henry died, and his body, in the old coffin of the Confessor, was buried before the high altar. So the two founders of Westminster Abbey lay for a little time together in the great church.



Margaret O'Brien and her mother buy a copy of Father Peyton's book for their library.

Fiesta of Stars



MOTION-picture stars, script writers, directors, producers, announcers, and other supporters of the *Family Theater* met recently on the lawn of a Beverly Hills (Calif.) home, to mark publication of a book, *The Ear of God*, written by Father Patrick J. Peyton, C.S.C.

Although the *Family Rosary* program is now promoted through other mediums than radio, it was appropriate that the Hollywood party be given by



the Hollywood radio stars. It was through their cooperation six years ago that Father Peyton was able to begin his program. Father Peyton tells in the book how the project began. He says he was distressed about the ills of the world. Morality had declined. People had abandoned truth, honor, and duty. They had sacrificed principles to expediency. Drunkenness, narcotic addiction, juvenile and parental delin-

quency, divorce, and crime were increasing. People denied a distinction between good and evil. They had become godless.

The remedy, Father Peyton believed, was a return to religion and its principles. The first step was prayer, which he called "the language of man to God." Family prayer was best, because it was built around the basic unit of Christian civilization, the family. The best



Father Peyton (left) is joined by George Jessel, Van Johnson, and Jeanne Crain at the Beverly Hills lawn party.

Rosalind Russell and J. Carrol Naish are star attractions.

form of prayer, in this instance, was the Rosary. And this argument could be presented to the greatest number of people by the voices of Hollywood stars over the radio.

Father Peyton was handicapped in carrying out his idea, because he did not listen to the radio nor see motion pictures. He knew no stars. He had no connections. Simply because he didn't know any better, Father Peyton took audacious steps in contacting stars and making plans. A more experienced person with less faith would have hesitated.

Tom Lewis, then vice president of an advertising agency, Young and Rubicam, and his wife, Loretta Young, were among the first persons to whom Father Peyton was introduced in Hollywood. They helped him obtain the support of other Hollywood professionals. Once the project was begun, many others offered their aid. *The Ear of God* tells of



"The Ear of God"—New Kind of Autograph Book



Loretta Young smiles as she inscribes her name on the flyleaf.



**Irene Dunne autographs busily, while
Clare Boothe Luce looks over the crowd.**

the assistance given by these persons. Within recent years, some of the most memorable *Family Theater* programs, such as the recitation and dramatization of the Rosary, led by Ethel Barrymore, have been put on records. One of the major commercial film companies in Hollywood, the Jerry Fairbanks organization, has made television films for Easter and Christmas. Through personal contact, crusades in the U. S., Alaska, Canada, England, and Ireland have obtained millions of pledges for family Rosaries. The book is the latest medium Father Peyton uses to tell his story.

The second part of *The Ear of God* contains a detailed explanation of the Rosary, meditations on the 15 Mysteries, and some of the best-loved prayers of the Church.

Many lawn parties and other affairs have



Roddy MacDowell, amateur photographer, has his own picture of June Haver.

been given in Hollywood and Beverly Hills to aid Father Peyton in his work. One occasion marked the opening of the Family Theater headquarters on Sunset Blvd. in Hollywood. When Father Peyton began his radio program, he operated from a few crowded rooms provided in Immaculate Heart college. The building on Sunset Blvd., a large mansion donated by a supporter, was remodeled and refurnished to provide ample room for production of the radio program and the other increasing activities. Father Peyton still believes that he has only just begun his efforts. *The Ear of God* is just one more effort by Father Peyton to make the world more mindful of God.

BOOKS

of Current Interest

Mitchell, Alice Miller. **ORIENTAL COOKBOOK.** *Chicago, Chicago Oriental council.* 109 pp. \$2.75. How to *Ah Sing* in your kitchen. A delightful collection of oriental recipes. You may never get as far as boned stuffed duck but you can enjoy *suki yaki* or sweet-sour spare-ribs. And in case you want to spot the dining-room rug there are detachable chopsticks on the cover.

Bradley, Omar N. **A SOLDIER'S STORY.** *New York, Henry Holt.* 618 pp. \$5. General Bradley writes his memories of the high command, the jealousies and cross purposes of men at war with the enemy and among themselves. The account of the Normandy invasion is a small classic, and many other parts of the book are of almost equal merit. The general is frank in delineating the personalities of the chief men who guided the Allied war effort, yet his opinions of top brass are often subtly colored by his intense admiration for General Marshall.

Hermens, Ferdinand A. **EUROPE: BETWEEN DEMOCRACY AND ANARCHY.** *South Bend, Ind., University of Notre Dame Press.* 291 pp.

\$4. Professor Hermens analyzes Europe with tough realism. Except for England, there is a lack of true sovereignty in most of the governments now in power. Opportunism, not belief, is the order of the day, a jockeying for power, a cynical disgust with all government. Hermens does well to point out that a Marshall plan based on dollar values is nothing without a political plan based on democratic realities. Hard reading, but repaying.

Whitney, Cornelius Vanderbilt. **LONE AND LEVEL SANDS.** *New York, Farrar, Straus & Young.* 314 pp. \$4. This diary is a homely account of American participation in the desert war that ended the career of Rommel. The final portrait of Forrestal, the raising of the flag on Iwo, and MacArthur's insistence that the Japanese would collapse in '45 provide a dramatic ending.

Hamm, Victor M. **THE PATTERN OF CRITICISM.** *Milwaukee, Bruce.* 308 pp. \$3.25. This perceptive volume of literary criticism, firmly based on St. Thomas, is a necessary book for teachers, book reviewers—all those, in fact, who aspire to an understanding of literature. The section on the moral judgment of literature is pertinent today.

Koch, Claude F. *ISLAND INTERLUDE*. New York, Dodd, Mead. 260 pp. \$3. This novel of war and desolation won the Dodd, Mead Literary Fellowship award. Justly so! It has balance and depth. The characters portrayed are not subhuman foot sloggers but three dimensional human beings. It is a relief to find a war novelist concerned with psychological and spiritual concerns. The salacious situation and easy pornography of the best seller are happily absent.

Shaw, Irwin. *THE TROUBLED AIR*. New York, Random House. 418 pp. \$3.75. Shaw follows his successful novel, *THE YOUNG LIONS*, with an eminently readable book. Readable and terrifying. If these are the sort of people who have amused us for the last ten years we can estimate just how far the termites have ranged in the framework of American life. For adults who want to understand how much we need spiritual values, or any values that will enable us to survive as a people.

Watkin, E. I. *A PHILOSOPHY OF*

FORM. New York, Sheed & Ward. 442 pp. \$6. This is a third edition of Watkin's great work, considerably enlarged. The two main parts of the book, "Form and Contemplation" and "Species of Contemplation," accurately sum up Watkin's generalizations. For those who are looking for a religious unity in life this book will be of profound help. For those lost in the forest of modern aesthetic theories here is no "little candle" but rather a lamp. A stimulating, creative view of all life and living.

Horan, James D. and Swiggin, Howard. *THE PINKERTON STORY*. New York, Putnam's Sons. 366 pp. \$4.50. The truth that is stranger than fiction is here and a selection of picaresque characters worthy of Madame Tussaud. There are a shade too many anecdotes and characters. The main story of Pinkerton evolution in modern crime detection has a tendency to get lost in a welter of smaller things fascinating enough in themselves. The story of the incredible Worth would make a book in itself.

Selections of Catholic Children's Book Club, St. Paul, Minn.

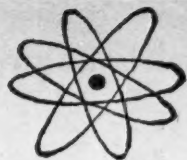
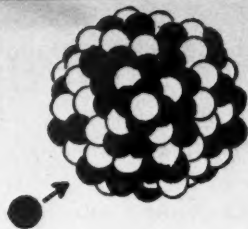
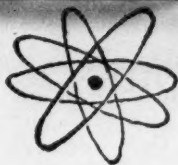
(Subscribers to this club may purchase at a special discount.)

Picture Book Group—6 to 9. *COW CONCERT*, by Earl Goodenow. (Knopf, \$1.50).

Intermediate—9 to 12. *GINGER PYE*, by Eleanor Bates. (Harcourt, \$2.50).

Boys—12 to 16. *ROOKIE SOUTHPAW*, by Burgess Leonard. (Lippincott, \$2.50).

Girls—12 to 16. *KAY ANN*, by Grace and Harold Johnson. (Whitlesey, \$2.50).

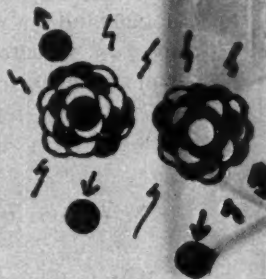
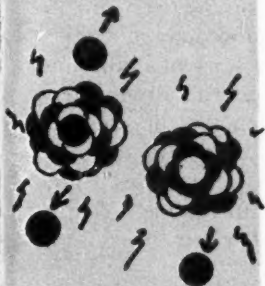


How We Split the Atom

BY LESTER DelREY

Condensed from a book*

LESTER DEL REY was born in Clydesdale, Minn., in 1915. When he was nine years old, he discovered a copy of Jules Verne's *Twenty Thousand Leagues Under the Sea*. The book started him on the study of a lifetime. In 1937, his first piece of scientific fiction was accepted. Since then he has been in the vanguard of those astounding persons who in their stories anticipate discoveries in science. As is revealed in the following excerpt, his stories dealing with top-secret material on atomics were among the few permitted to be published when such information became taboo. The sudden stoppage of such material would have been too obvious. Here is an explanation in simple and everyday terms of the development of atomic energy.



*It's Your Atomic Age. Copyright, 1951, by the author. Reprinted with permission of Abelard Press, 381 Fourth Ave., New York City. 226 pp. \$2.25.

How We Split the Atom

By LESTER DEL REY

ATOMIC energy isn't some great mystery that can be understood only by specialists with years of training and wholly new ways of thinking. The basic principles necessary to understand it and the general steps in creating it are among the simplest things in modern science. Fortunately, even the 20 or so new words necessary to discuss this science are now mostly common knowledge. We can relax and begin at the beginning.

The real beginning should go back to the first moment when the sun came into existence. As the tremendous bulk of the sun came to be, the matter at the center of that sun was under conditions of unthinkable pressure. This was pressure that didn't merely force the atoms of that matter tighter together. It actually forced the atoms to collapse. They lay together with the nucleus of one almost touching the nucleus of another. The *electrons*, which normally swing about outside the nucleus, something like planets around a sun, were shoved inward, until there could be no wasted space.

But even this packing of atoms could not relieve the pressure sufficiently. Nucleus was sent driving into nucleus. Some of the mass be-

came energy in that operation. Under the conditions of enormous pressure and incredible temperature, a chain reaction was set up which began adding first one atom of hydrogen—the simplest atom, having only one electron and one nuclear *proton*—to an atom of carbon, then another atom of hydrogen, and so on, until four hydrogen atoms had been added. This produced an unstable atom, which broke apart to give the original carbon atom and a new atom of helium—which has two electrons and four nuclear particles—two protons and two which are now *neutrons*.

This reaction yields all of the energy of the sun. When you look up at the sky and see the blazing disc of old Sol, you're looking at one of the greatest machines known. It is a machine which works on almost eternally, serving as its own fuel, and regulating itself automatically. If the reaction speeds up, the temperature rises, overcoming the pressure a bit, and slowing itself down. If the reaction slows, the temperature drops, and the *nuclei* (the proper plural of *nucleus*) come together a bit more tightly, thus speeding up the reaction.

We've long realized that all the energy man uses comes from the

sun eventually: wind power, from changes in the heating of the air; water power, from the evaporation and condensation of water; coal, from plants that once grew by sunlight. In the long run, all the power and energy we have comes from atomic energy.

Men recognized their debt to the sun long ago, but there was no way of accounting for the tremendous production of that energy without the sun's burning out. No known chemical reaction could possibly maintain it. And it was because of this that the astronomers were forced to look elsewhere for such a source of energy, and became the leading experts on the purely speculative field of atomic reactions.

They had a clue from the fact that matter was finally known not to be completely stable. A physicist in France near the beginning of this century had left some photographic plates near some uranium, and had found the plates clouded. The only explanation of this which eventually proved satisfactory was that matter—previously thought to be fixed and immutable—was breaking down; that atoms were changing to other atoms, loosing energy in the process. The Curies spent long and dangerous years investigating this, getting the highly active radium separated from the much less active uranium, and making a number of discoveries which changed the whole picture science had of the atom.

Before that, there had been two laws. "The Conservation of Energy" law stated that energy could be changed, but not destroyed; "The Conservation of Matter" law stated that matter could be altered in form but not destroyed. This now became only one law, which simply stated that matter and energy were separate forms of the same thing, and that change was possible between, as well as within, them, though mass-energy could not be destroyed.

A TREMENDOUS amount of theoretical work was undertaken to fit this new understanding into the body of science, and make it productive of useful results. The most famous work was that done by Albert Einstein, who finally summed up the natural law governing the change of matter to energy, or vice versa, by the simple equation: $E = Mc^2$.

This means that the energy released by the change of mass to energy is equal to the mass multiplied by a figure which is the square of the speed of light. Like other advanced formulas of science, this equation requires the right units and manipulation to give correct results. But it does give us a statement of the orderly conversion of mass to energy. Science thus had its foot within the door that led to the eventual releasing of atomic energy.

Meantime, some use had been

found for this tiny bit of energy locked in radium. By weight, the energy was enormous, but there was only a small amount of radium available, and the energy was being released very slowly. Science had discovered that it took 1700 years for radium to disintegrate, or break down into something else (radon gas, itself radioactive, and leading through a series of changes that eventually left nonradioactive lead). Then in another 1700 years, this remaining half would again break down to half of that, and so on. This *half-life* varies with different elements, ranging from millions of years for normal uranium to only hours for some of the elements produced in the chain between radium and lead. Obviously, the longer the half-life, the less energy released in any given amount of time by any given amount of that element. The unreleased energy is the reason some of the radioactives created in atomic piles are so much more dangerous than even radium, weight for weight.

In the case of radium, this energy was just strong enough to produce a visible glow from a very tiny amount. As a result, watchmakers seized on it as a means of making their timepieces visible in the dark. Tiny as the amount used is, it's surprising how active it proves. Many "luminous" watches give off enough radiation, some as visible light, some as rays which are tiny, dangerous, broken parts of atoms, to

produce a definite radium burn on the wearer, if it were not that the metal back of the watch serves as protection.

Radium can also be used to replace X rays, in some cases, for photographing through solid matter. And it was used as a means of destroying cancer, inserted into the cancer by tiny needles. This was ticklish business, however, since the radiation was also known to damage normal tissue and sometimes even to produce cancerous tissue.

MEANTIME, in the research laboratories, men were working with tremendously expensive machines, trying to pry apart the basic building blocks of the atom and learn more about them. They were not directly trying to find atomic power, but they realized that in learning more of how the atom was built and how it operated, they might eventually find the answer to making it work for them.

It didn't look too encouraging. The more they found of the atom, the more complicated it seemed to be. Originally, there had been two particles: a negatively charged electron, which circled, or was fixed outside, the nucleus; and a positively charged proton, which was located at the center, or nucleus, and which had more than 1,800 times as much mass as the electron. Now they were finding all manner of other particles: little positively charged particles with the same

mass as the electron, called positrons; big particles of about the mass of the proton, but without any charge, called neutrons. There were indications that even this wasn't all of the picture.

It would all have been quite simple if they could have put an atom under a microscope and looked into it. But that was impossible. With a light microscope, they could magnify things about 2,000 times; with the new electron microscope, which used a beam of electrons in place of light, they could get more than 100,000 times magnification. With this, they were not quite able to see even the big atoms. But the atom is an immense thing compared to the particles in it, and there was no way, even theoretically, in which they could hope to look inside the atom. That had to be done by shooting particles of atoms against other atoms in the "atom-cracking" machines, tracing the result, checking it against theories, rebuilding the theories that didn't work well, and slowly getting a better working picture of just what did go on inside the atom.

And the atoms were being stubborn. Most of the particles shot at them in 10-million-volt to 100-million-volt charges from the machines simply hit nothing. When a hit was scored, they sometimes got energy back. But the energy was in such tiny amounts that it was like using 1,000 horses to pull thread through the eye of a needle.

In 1935, there seemed to be no way of making the atom break down and give up its energy. Of course, there were those atoms which were willing to do so by themselves, at the slow rate of their normal half-lives. And there was no way of knowing whether—if an atom could be broken—that the results might not form a chain reaction that would go on and on until the whole earth was a smaller sun. Most scientists were pretty sure that couldn't happen, but they admitted the possibility.

THEY had learned that some of the large atoms—the largest being uranium—were unstable. In the nucleus of such an atom, hundreds of particles were packed tightly, and should be ready to break out violently. Some mysterious force, which they called *binding force*, since it bound the particles together, was being strained to hold the particles. It was something like a bunch of rubber balls packed into a balloon under pressure. Every so often, a balloon would break under the pressure, and the particles, or balls, would go bouncing around furiously, as happened naturally with radium and uranium.

The particles they shot at these "balloons" would sometimes hit and break one. Theoretically, some of the particles breaking out from such pressure should have broken others, until a frenzy of explosions took place. Instead, the balls that

broke seemed to rebound harmlessly and work their way out of the maze with almost no damage. Something else was involved that protected those straining nuclei of uranium. Science dug in to find what it was.

In 1935, man had a universe around him powered by atomic energy in the stars, an energy of small atoms building into bigger ones, or fusion. He was using the breakdown of the bigger atoms into smaller ones for tiny amounts of power, just enough to let him see what time it was without striking a match. This was a form of atomic fission, or at least a suggestion of what might come. He had men studying the stars and figuring out the behavior of atoms by the light emitted. And other men were busily at work trying to dissect the atoms in the laboratories.

He knew something of both possible types of atomic energy, and he had pretty good hints of how he could get them, once he could find why those bouncing balls wouldn't crack the overstrained balloons. But atomic power looked like something a long way off, and only optimists were saying it would be achieved in this century. Science fiction was using it in stories laid well in the future. Sunday supplements were cautiously speculating as to what it might accomplish. The predictions made it seem something like a fuel to be placed in boilers instead of coal. Explosion-use was

only touched on briefly, and without conviction.

Two years later, in 1937, the answer was found, though not at first understood. The optimistic 65 years needed became ten, and the war that began two years later shortened that considerably. The answer did not lie in any ponderous machine, but simply in the basic nature of the atom itself.

WE can picture the atom satisfactorily with only three particles, although a number of others are known. The first particle is called the *electron*. This has a *negative* charge, and is found outside the nucleus of the atom. Electrons can be knocked off the atoms fairly easily.

A common flashlight cell sends electrons out of the negative pole and back to the positive. This flow of electrons is common direct-current electricity. The hot metal of the cathode of a vacuum tube emits electrons. The controlled flow of these through the tube and other parts of the radio, or other device, give us the science of electronics. Whenever an atom is robbed of an electron, it has an excess positive charge. Hence it grabs the next electron that comes along, maintaining the balance.

The *proton* was first discovered in the nucleus of the atom. The proton has a great deal more mass than the electron—1,836 times as much. It also has a *positive* charge

to balance the negative charge of an electron. The atomic number given in any table of the elements indicates the number of protons in an atom, and also the number of electrons which are outside the nucleus in a balanced atom.

The simplest atom can be built with these two particles. We place one hydrogen atom before us and mentally dissect it. We find a nucleus consisting of one proton, and having one electron "circling" around it. This is normal hydrogen. (Normally, as found in hydrogen gas, two of such atoms lock together to form one molecule.)

To build other elements, one more particle is needed. This was discovered by James Chadwick as late as 1932, 13 years after the proton had been discovered, and 13 years before the first atomic bomb was exploded. This is called the *neutron*, because it has no charge, but is neutral. It also has a mass 1,836 times that of an electron.

There have been numerous theories that the neutron is a proton fused with an electron to cancel the charges, or that a proton is a neutron plus a *positron* (something like an electron, but having a positive charge). There are occasions in which one theory or the other seems to work, but it's better to consider them as separate particles, and leave that for future research. It is interesting, however, to note that even the ultimate particles making up the atom may be com-

plex groupings of other smaller particles themselves.

Now we begin building more complicated atoms. Helium is the second element. It is made up of a nucleus having two protons and two neutrons together with two electrons outside the nucleus to balance the two positive charges of the protons in the nucleus. Since opposite charges attract, the absence of an electron creates an attraction for an electron which normally will be collected to cancel the excess positive charge.

The nucleus of the helium atom is also called an *alpha* particle, and is one of the particles radiated from either radium or an atomic pile.

FROM here, we can roughly construct the atoms of all elements. The atomic number determines the number of protons in the nucleus (and, of course, electrons normally in the orbits, or electron shells, around the nucleus). The difference between the atomic weight and the atomic number will determine the number of neutrons in the nucleus. Normal carbon, for instance, to a physicist, becomes now ${}^6\text{C}^{12}$, which means it has a nucleus of six protons, an atomic weight of 12, and hence must have 12 particles in the nucleus, six being neutrons. Tables of atomic weight and number can be found in any chemistry book, for the curious. However, the exact construction of each atom is of little importance here,

provided we know the general principle.

The electrons, incidentally, do not all lie in the same orbits, or shells. The inner (K) shell holds two electrons. Hydrogen and helium both fit here. The next (L) shell holds up to eight. Thus carbon has two electrons in the K cell, four in the L shell. The next (M) shells holds 18; next (N) 32, and so on.

With this, we can draw pictures of atoms. We have to draw the shells (which behave very much as if the electrons shifted around so rapidly as to cover all the spherical surface of a shell) as simple orbits, like planets going around a sun. We know also that there are actually several closely grouped subshells going to make up most of these letter-marked shells. Without being too precise about it, we now have a working picture of the atom which is essentially correct, according to modern belief.

Most of the seemingly solid atom is obviously just empty space. In fact, if matter could be crushed together until the nuclei were in contact, instead of being separated by the distance of these electron shells, matter would weigh about 2 billion tons per cubic inch! And the earth would be only about one-fifth of a mile in diameter!

All atoms of any element are not necessarily precisely alike. We all know of uranium-238 and uranium-

235. Both are the same element, since they have the same number of protons, the same number of electrons, and behave the same chemically. But the atomic weights (which the numbers represent) show that they have different numbers of neutrons in the nucleus. These different forms of the same element are called *isotopes*, and most elements have several isotopic forms.

Hydrogen has three isotopes. The normal form is the one mentioned—one proton and one electron, called hydrogen-1. This was first made popular in "heavy water." It was formed by adding one neutron, and called hydrogen-2, or more often, deuterium. The nucleus, or proton-neutron combination, is called a deuteron. We have produced a third form by adding still another neutron, called hydrogen-3, or tritium. This can be obtained, however, only from the atomic-pile reactions.

Whenever the exact isotope necessary for a process is needed, it will be indicated simply by the number following, which clearly shows which form this particular isotope has.

ALL this deals actually with atomic structure; but atomic power is concerned with the nucleus, rather than the whole atom. That requires further study. Once we have covered that, we'll be able to leave what is, at best, rather heavily

loaded factual material, and go on quite pleasantly with the rest of the subject. In fact, the nucleus is a bit more interesting than the rest of the atom.

The scientists suffered a major headache in trying to hold the nucleus together properly. All protons have positive charges: and like charges repel, just as opposites attract. The closer you get those charges together, the more they repel each other. Of course, the old force of gravitation pulls these particles together, but that isn't enough to hold the protons inside the nucleus against their mutual repulsion, though the neutron, being without charge, shouldn't give too much trouble. Frederick Soddy gave a rather nice example by calculating that a gram (about $\frac{1}{160}$ of an ounce) of protons concentrated into one point on the surface of the earth would repel another gram of protons concentrated at an opposite point on the earth's surface with a force, or pressure, of 28 tons, at 8,000 miles distance! Then consider that atomic nuclei appear to be approximately a mere .000000000004 inch in diameter—four one-trillionths of an inch!

SOMETHING else was obviously needed to keep the atoms from exploding of their own repulsion. Actually, about all we can say today is that there is something else, which we have named binding force, simply because it binds the nucleus

together. It's our "balloon" which kept the tightly packed balls from separating.

But at this outer level, at four one-trillionths of an inch diameter, our "balloon" isn't going to give way at the prick of any casual "pin." It can handle only certain arrangements within itself with stability, of course. Normally, for six protons it is most stable with an arrangement that includes six neutrons—our normal carbon nucleus. We can force in two more neutrons to get carbon-14, but this is somewhat unstable. The carbon-14 proves this by being radioactive and beginning to break down slowly, with a half-life of well over 5,000 years.

All uranium is slightly unstable, since even U-238 breaks down with a half-life of 4.7 billion years, but the isotope U-235 is less stable, in this case, than the one with more neutrons. For each element lower than bismuth in atomic number, there are one or more stable arrangements, but never more than a few. Cadmium or boron have several stable isotopes, which means they can soak up neutrons without becoming radioactive. This makes them useful for slowing down an atomic pile. But the number of stable isotopes is limited. And when we go to the heavier atoms above bismuth, thorium, radium, uranium, etc., none is fully stable, since the strains and stresses on the binding force begin to weaken it.

That binding force still resents outside violence, however. An electron shot at it is usually going to be tossed off, even if the aim is perfect. It takes 5.9 million electron-volts (a term which has nothing to do with power, but only with energy levels on a subatomic scale) to overbalance the binding force of U-238.

But applying that to the individual atomic nuclei—when all matter is so largely just open space for particles to drift through—is something like standing in Africa with a shotgun and banging away, in the faint hope a pellet will bring down an elephant that must be around somewhere on the continent.

The scientists bombarded the atoms with high-voltage electrons and with deuterons (hydrogen-2 nuclei) and alpha particles, and they made some hits, but the percentage of energy they got back was totally insignificant in comparison with what they put in. When they did make a lucky hit, something happened to that atom, and that was all.

It takes a 6-million-volt X ray to crack the U-238 atom—if it can be hit.

Going back to our crude picture of a balloon stretched tight over packed rubber balls, we might say that the balloon was almost perfectly elastic, up to a terrific limit. Even with the strain on it, it would soak up any normal shock instantly, and

throw the force of that shock back out of harm's way. The cork from the popgun wouldn't do the trick. We could blast it away by using a high-power magnum rifle (the 6-million-volt X ray, for instance). But we were unable to aim that rifle so each shot hit. If we stood in Africa with a gun of sufficient range and shot at random, we'd eventually hit an elephant, but it's a wasteful way of working the trick.

What about trying neutrons, however, since we've tried everything else?

It was a good idea. That binding-force balloon didn't seem to recognize a neutron as something which should be thrown out. It was as if there were a gatekeeper who stood there, holding the gate closed until a neutron came along, and then threw it open and yelled, "Pass, friend." After all, neutrons belonged in the nucleus, and there was no exact law about how many could come in.

In scientific slang, a nucleus could *wet* the neutron. If you have a soap bubble, you can thrust an oil-coated needle against it. The surface tension won't crack, provided the oil is of a kind that isn't readily dissolved in the soap emulsion. Or some bugs can walk on water because the oily layer on their feet won't mix with the water. The surface simply bends a trifle. Put a detergent on such a

bug, dissolve this oil on his feet so the water will wet him, and he sinks.

The binding force of the atom and the neutron did not repel each other, and the neutron moved in quite happily, again, provided the neutron hit the nuclear target with a moderate speed.

The trouble was that a neutron added only 5.2 million electron-volts energy to the U-238 atom, and it took 5.9 million electron volts to crack that atom wide open. Otherwise, it simply turned into U-239, spit out a negative charge, became neptunium-239, spit out another negative charge, and became plutonium-239, which is a fairly stable atom, having a half-life of about 24,000 years. (Here the neutron seems to act like a proton plus

an electron, so that spitting out negatively charged electrons changed two neutrons to protons, raising the atomic number from 92 for uranium to 94 for plutonium. There are other cases where a proton behaves like a neutron plus a positron.)

Also, the binding force had a little resistance, even to a neutron. The neutron had to be traveling at a certain speed. If it was traveling slower than this, it simply went bounding around leisurely.

Uranium was used in the above case simply because uranium has a gain of energy from the entrance of a neutron which isn't *too far* from that needed to split it wide open. Work was actually being done with a number of atoms, but we now know that there were only two natural elements which offered

ATOMIC war would be destructive, but the use of atomic bombs can hardly be wholly decisive. Unless the attacker can eliminate all the stockpiles at the first blow, there will be retaliation. If we were to attack Russia, we could logically expect to find our major cities wiped out within hours—and that is certainly not sound policy. If Russia were to attack us with such bombs, she might have an advantage in her decentralized population and industrial setup—but she would also have to contend with a stockpile of bombs from us which is much greater than any she can possibly have. Even to Russia, the damage would be unthinkably horrible.

The major threat could be from some smaller country, out of the main path, which developed the bomb and used it to set Russia and the U. S. blindly against each other, both unaware that the third country was responsible. This is not too likely, fortunately, since the smaller countries would have considerable difficulty obtaining uranium to develop the bomb.

any hope, thorium and uranium, and uranium proved eventually to be the key, as well as the better of the two.

Of course, if we could hit the same atom with two neutrons—but how much chance would our hunter, firing at random, have of hitting the same elephant twice, if he was likely to fire two shots in the same direction only once a month?

We've been talking about U-238, however. There is another isotope, U-235, occurring in nature. There isn't nearly as much of it, since only about one part in 140 of natural uranium is U-235. (It's less stable, having a half-life of .7 billion years, so it disappears faster than U-238, but there's still a fair amount left.)

HERE the figures are more interesting. A U-235 nucleus doesn't care how slowly a neutron approaches it. With a complete tolerance, it opens the gate to the weariest neutron straggler that can just barely wander up to it. And that friendliness carries over, since it puts on a much bigger celebration for the straggler, once the neutron is in.

One neutron added to a nucleus of U-235 adds 6.4 million electron-volts, but the nucleus can only stand a strain of 5.2 million electron-volts. The result is something like admitting to your home a stranger who is carrying a good-sized bomb with the fuse lit.

You might be able to jump up in

time to toss the bomb out of the window, but most of us couldn't. The same applies to the U-235; a few isolated atoms will manage to spit out this excess energy, but nearly all of them simply blow up.

The result of this is that some of that strained binding force now shows up in a flood of energy; torn hunks of the nucleus go charging off, trying to twist themselves into simpler atoms of something else, and a few neutrons are left to find themselves new homes in the process. This averages slightly over two neutrons tossed out for each that went in.

Aha! Wonderful—we have a self-perpetuating process, haven't we?

We do not. We're still working with one part of U-235 to 140 parts of U-238, and we still have a tremendous amount of empty space between atoms. We can get around the last part by increasing the size of our chunk of uranium, of course, since the further you go through a forest in a straight line, the greater your chances are of hitting a tree. But our old friend, the U-238 nucleus, is probably going to be the tree hit. And this, of course, simply opens up, takes in our rapidly moving neutron, and turns into plutonium, soaking up so many of the neutrons this way that the whole action dies down.

We could start with pure U-235. But separating isotopes is slow and expensive work (which we can do much better now than we could

when all this preliminary work was going on). And, in this way, we'd use up our fuel without any chance to replace it.

The answer has already been supplied: slow down the neutrons below the speed at which U-238 will accept them; the U-235 will still take them in, but the U-238 can't get them.

Or, still better, slow them down so that some of them will be too slow for the U-238, but some will find homes in U-238. If we can balance this just right, we'll be getting a self-sustaining reaction which will produce energy, and will also be getting a supply of plutonium-239. This behaves much like U-235, and will also react with a slow neutron to produce a nuclear explosion that yields energy and an excess of neutrons.

WITH this, we will be able to replace our fuel with its equal as fast as we use it; in fact, since we get more than two neutrons back for each put into a U-235 nucleus, we have a slight surplus with which we can increase our supply of fissionable fuel.

That, of course, is precisely what we did, though we didn't use all the plutonium for fuel in piles, of course, as everyone knows by now. We found we could do other interesting things with that, such as blowing whole cities off the map and ending a war in a hurry.

Actually, though, this was not

the reasonably figured process of pure research it may seem. Like a lot of science, it combined a series of trials and errors with a trained ability to figure out what the results of those trials and errors meant.

Even after the trick of releasing atomic energy had been found, nobody knew that it worked like this for some time. It aroused a great deal of attention as an interesting reaction, offering more knowledge, but the first man to perform the experiment of fissioning U-235 with slow neutrons didn't know exactly what he'd done until later. Science seldom has the good luck to be able to say, "We'll do thus and so, and get such-and-such"; usually, it does thus and so to see what happens. But it differs from sheer bumbling in that it then turns around and finds just what has happened, and gets just that much more usable knowledge for its next trial.

The first practical step to atomic power came in 1937, just two years before Germany and Italy were to be at war, a war in which they were opposed eventually by the U.S., and in which the final chapters involved our use of atomic bombs.

It's interesting to note, then, that the key to atomic power and the bomb was discovered by an Italian scientist named Enrico Fermi, and that the understanding of his achievement was given us by a German physicist, Lise Meitner.

Fermi was the first to shoot slow neutrons into uranium. He announced his results, as all scientific developments in this field were then being made public, and stated that this had produced 200 million electron volts of energy, far beyond any other previous step. (The power was microscopic in the actual experiment, but the electron-volt energy indicated that this was capable of release of tremendous power.)

At the time, he believed that he had simply created a new element heavier than uranium, and a preliminary analysis of the products of the reaction seemed to indicate that such was the case. The word *fission* was not used, and nothing beyond a simple new element was considered.

Even so, it was enough for wild excitement among scientists working in this field. John W. Campbell, Jr., editor of *Astounding Science Fiction*, where interest in atomic energy was as great as anywhere at that time, announced immediately afterwards that we now knew the name of the Columbus of the atom. At the time, this still smacked of prophecy, but it was shortly to be confirmed, though his reports to his readers were soon to be stopped, along with all such news.

Then Lise Meitner and Otto Hahn began checking on Fermi's results, and finding exactly what had happened. It was even more

than Fermi had hoped. He hadn't raised the atom's number, but had burst it wide open, with fragments flying about and gathering themselves into whatever atoms they could, and with an obvious key to putting the process on a completely self-sustaining basis of operation.

THERE was a period of further excitement then, along with a large measure of doubt. Nobody knew whether we could proceed with the natural mixture of isotopes of uranium, or whether it might not be necessary to accumulate the pure U-235.

If the latter were true, then it would mean tremendous expense, since no good way of making such a separation was known. It could be done by passing a stream of ionized atoms in a gaseous form past an electric field; the heavier U-238 atoms would be deflected less than the lighter U-235 ones. But this yielded result almost atom by atom, and obtaining a pound of U-235 would prove to be a herculean task. (Nobody knew then that a certain amount of U-235—the exact figure is top-secret—could explode.)

Nobody knew for sure how safe it would be if it did work. They believed that too fast a release of energy would gasify the uranium, spreading it out until neutrons escaped, and hence slowing it down; but they could not be sure that the results there would be fast

enough to check it before the action got completely out of hand. A writer, who was dealing with a fictional future where industrial power was furnished by uranium fission, found, in a few weeks between finishing and seeing his story published, that the evidence had switched back and forth five times between its being possible and impossible to control the reaction easily.

Nobody was yet thinking in terms of bombs. The idea was first to get it working as a means of securing information about atomic behavior; and they knew even then that it would yield a tremendous number of "unnatural" radioactive isotopes of various elements, of incalculable value in all sciences. After that use of it for basic research, they considered it with large doubts for commercial use.

However, for whatever use it might be turned, there were certain problems that had to be solved. One of those was the trick of slowing down the neutrons. Those came out of the fissioned atom at a high velocity, so high that they stood an excellent chance of being mostly wasted.

The problem was not simply a big enough pile of uranium, but some way of using a small enough quantity so that the U-238 wouldn't trap those neutrons until they could be slowed and returned to work on the U-235.

That meant surrounding the

ACTUALLY, a miniature pile isn't hard to construct. All that is needed is a supply of heavy water and uranium, in the form of nearly pure U-235. If a few gallons of heavy water are put into a bowl, and a piece of uranium of the proper size is dropped into it, you will have a pile—and one which is safe enough, since the water will boil away before the level is too high. However, it isn't a good experiment to try without proper shielding.

U-235 and U-238 with something which would not absorb neutrons, as cadmium, boron, and many other substances will, but which would soak up their momentum and bring them down to less than 25-volt energy levels, or speeds.

This can't be done with lead. Lead is a good way of cutting off radiation, of course, but it isn't a good means of slowing a neutron. All matter, to a neutron, is pretty much like a vague mist of electron shells, with a few widely scattered balls of nuclei: there is no such thing as a solid barrier.

And lead has a heavy nucleus. A ping-pong ball that strikes a billiard ball will hardly move the billiard ball at all; instead, the ping-pong ball will rebound with almost its full momentum, though in a changed direction. On the other hand, if you can shoot a billiard

ball against another, the first one gives up about half its momentum to the second, and after a few hits against other balls, will come to almost a stop, even without the friction of the cloth. So what we need to slow the neutron is something of about the same mass as that neutron.

There seems to be an obvious solution—hydrogen has a nucleus composed of a proton of almost identical mass as the neutron. But it obviously can't be used in the thin, attenuated form of a gas. Well, how about water, in which there are two atoms of hydrogen linked to one of oxygen?

Again, there's a problem. Hydrogen can soak up a neutron to become H-2, or deuterium. We don't want to lose those neutrons. However, if we begin with deuterium (water can use deuterium in place of hydrogen, to give us "heavy water"), this will eliminate all such trouble. And while a deuteron, or deuterium nucleus, has twice the mass of a neutron, that isn't too serious. It will be less efficient in some ways, taking longer to slow the neutron, but even if the nucleus is several times heavier, it will still work.

THEN, obviously, we've got the basic idea. Surround your uranium with a "moderator," or substance which moderates the speed of the neutrons. Leave the pieces of uranium small enough so that most of

the neutrons escape into the moderator, and are slowed down and thrown back to drift slowly into the uranium, ambling along, striking perhaps hundreds of nuclei of U-238 at too low a speed to enter, and finally winding up again in an atom of U-235.

This will work, if it's safe. And, as it turns out, it is safe. If we dump the uranium into heavy water, the uranium begins to react until it gets to the point where the water will begin to boil. Then the decrease of water density will halt the process, to begin all over again. Or in even a solid moderator, we can control it by having something to absorb excess neutrons. The reaction won't build up too quickly, because there's a delay between the emission of a fast neutron from a fissioned atom, and its return, after repeated collisions, to another nucleus. This delay puts things nicely within our ability to control them.

Everything was now beginning to shape up toward a success. But Hitler had moved into Poland in September of 1939, and England soon made the inevitable declaration of war which officially announced that this was to be the 2nd World War. The nice dream of quiet research was obviously no longer possible in a world where someone might develop atomic weapons, and where we might be sucked into the fracas.

The supposedly absent-minded scientists saw what they were facing,

talked things over, and decided that this was too important for mere private handling, and that they must turn it over to the government. They still didn't know what would come of it, but they did move at once to the only practical solution for the times.

During the early part of the war, there was some speculation on atomic power, but nobody knew how it would work. Robert A. Heinlein, under the pen name Anson MacDonald, wrote a story for *Astounding Science Fiction* dealing with the problems of a world having atomic weapons, and his "Solution Unsatisfactory" has proved remarkably good prophecy. But the most logical weapon then seemed to be the dusting of artificial radioactive isotopes, something like a super-gas, over the enemy, killing him by radioactive poisoning. Probably, if the atomic bomb had been impossible, this would have been used. And, certainly, the scientists knew that some such thing might be the inevitable weapon.

Already, however, there was speculation going on about the use of explosive atomic energy in war. The scientists first clamped down a voluntary censorship, and then some of them, headed by Albert Einstein, paid a quiet visit to President Roosevelt, in which the present progress and future possibilities were outlined, together with a tentative plan for wartime research.

Roosevelt was not only convinced

of the wisdom of their advice, but performed the remarkable feat of getting a sufficient appropriation from Congress without making the real purpose public. To announce a heavy atomic program would have been a certain key to equally intense research by other countries. As Fermi and Meitner, among others, had demonstrated, nuclear research had been moving along elsewhere, as well as here. This appropriation came to some two billion dollars, in the long run; and the tremendous amount of money available for intensive research shortened what might have been decades to a few years. It's interesting to speculate on what might be done to cancer, with a similar sum of money for research!

THE lid was now clamped on completely. No mention of atomic energy was permitted. Curiously, one exception was made, and that for security reasons. For years, *Astounding Science Fiction* had been publishing speculative fiction on the subject, the editor himself being trained originally in the field of nuclear physics. Mr. Campbell was able to convince the security officials that to stop such stories abruptly would be a sure sign that we were working on atomic weapons, and this magazine continued to use some fiction which dealt with the subject. At the time, it was not uncommon to find a copy of the magazine on the newsstand

while another was filed away in a scientific library, marked *Top Secret*. I am told that one of my own stories, totally unrelated to bombs, but dealing with industrial atomics of the next generation, was given that paradoxical honor.

A rather frantic scramble followed, since no one could be sure of what fantastic thing might turn up. Calculations were going on busily as to the best arrangement of the uranium and a moderator.

It was on the choice of the moderator that our ingenuity showed itself best. Heavy hydrogen, or deuterium, was the ideal. But it was hard to get in quantity; it existed in normal water to some extent, but separation was slow and costly, and speed was the important thing. (We now have much better ways of getting it, as a result of the war work.)

Working under the Manhattan

Project, as the atomic energy program was innocently named, the decision was not to waste time on heavy hydrogen. The other light elements were considered. Lithium, the third element, takes up neutrons voraciously. Beryllium, fourth, was not to be had in any suitable form at the time. Boron, fifth, is fine for damping the action by getting rid of the neutrons. The next candidate was carbon, the sixth element, with a nucleus of six protons and six neutrons; it was far from ideal, but it would work, apparently.

The Germans were working on atomic weapons, too. They had been faced with the same problem of finding a satisfactory moderator, but they had gone at it a bit differently. The ideal moderator was heavy water, and the next suitable moderator was only one-sixth as good. The Germans had too little heavy water, but could get more.

DURING the war, a young scientist was working with some rather large masses of plutonium. Somehow, these came too close together and began to behave just as they would have in a nonmodulated pile. There was no danger of an explosion, but the raw radiation could prove fatal to those around. Knowing what the results would be, he did not run. Instead, he plunged forward into the radiation, forcing the masses to a safe position. He was removed as quickly as possible, and given every care that science could provide, but the radiation had passed the critical level. This was wartime, and it was impossible to tell the story, since it would have been a tip-off on our atomic progress. Even his family had to be kept in the dark. All that could be done was to make his death as comfortable as possible.

Posthumously, he was awarded a medal for his bravery. He was the first martyr to the atomic-research program.

They went along, accumulating their heavy water as best they could, but it always seemed to be a case of success just around the corner. Theoretically, there was a weapon there, but the time was growing late, and theory wasn't what Hitler wanted. A rocket that could carry explosives to England was much less theoretical, and the money for research was channeled to that with considerable success. The Germans had no atomic bombs at the end of the war.

It would seem that, even in science, too much desire for perfection can sometimes be fatal. Between our willingness to try what we could when the best wasn't at hand and our ability to keep a secret that was shared by thousands, and guessed by untold thousands more—who were fortunately shrewd enough to know it must be kept if they were clever enough to guess it—we won the race for the atomic bomb.

The first atomic "machine," or pile, which might be called a transformer that changes mass into energy, was not at all like the stories and predictions of the decade before. The first pile was built under the football stadium stands in Chicago, and appropriately named the West Stands pile. It was a ponderous pile of graphite blocks (graphite being a form of carbon) and uranium, with concrete to shield it.

It was designed to be as inefficient as it could be and still operate.

The men who built it had no intention of letting anything get out of hand, and they were aware of the fact that theory and actual practice are not necessarily the same.

It operated. At its maximum yield of power, it could furnish enough energy to light a couple of normal mazda bulbs, though not in the proper form of power, of course. For a very brief time, they let it rise to such power, and then operated it at a level of *less than one watt* for the rest of its brief running time. Barely running, choked down to keep it at its minimum, it was producing enough energy to equal the normal production of a 10¢ flashlight cell. It was as if an automobile had been powered with a tiny motor that could drive it, through gearing down, at something less than a mile a week.

BUT it worked. It did everything it should have done, and did it as it should have done it. It changed theories to engineering facts, and laid a firm foundation for what was to come later. If the men observing it felt a wave of awe at seeing their theories confirmed, and watching that tiny trickle of power, they were entitled to such a feeling. This was the first time man had found what might be a source of immense commercial power that was not derived somehow from the sun. And it had taken him only about a third of a century to move from the theory that matter could

be turned into energy to the accomplished fact.

After the success with the West Stands pile, huge funds were thrown into the building of Oak Ridge, which was a sort of shotgun affair, designed to cover research along any hopeful line. They had no time to extend their knowledge first, and build to fit. They built first, and hoped they'd included enough to take care of anything the knowledge might lead into.

The Clinton pile was designed for research, but not for the type of research the scientists had once expected. Fissioning uranium breaks down into a whole host of radioactive and rare isotopes, of tremendous experimental value. But this was a necessity research, and, since such impurities had to be removed from the uranium of the pile periodically to prevent their absorbing neutrons and stopping the reaction, automatic machinery separated out the by-products for disposal. No complicated method of salvage was used.

The Hanford pile was the first truly commercial pile ever built, and it was a commerce allied to the munitions-making businesses. By this time, we knew exactly what was wanted: plutonium could be used to make a bomb, and plutonium could be created from U-238 in a pile. The Hanford pile was operated so that the maximum number of neutrons might strike U-238 nuclei without the slowing

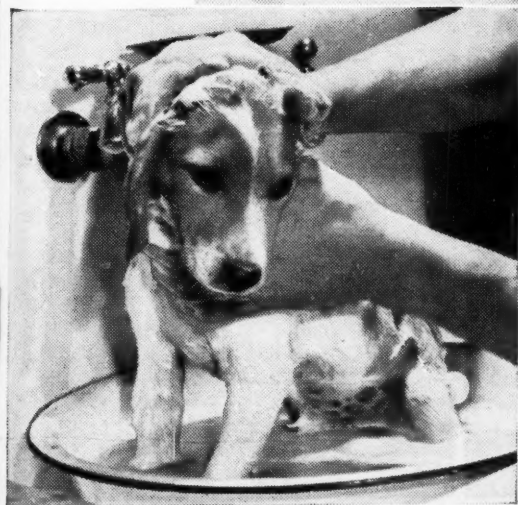
down of the reaction, and it was designed for the separation of this plutonium after it had been made. The heat produced, the energy that we had once hoped for, was a nuisance that had to be removed by pumping in water to carry it away.

Meantime, better means of separating U-235 were being developed, and men were stockpiling both U-235 and plutonium. The all-out effort now was toward a bomb.

On July 16, 1945, the practical trial of all this work was undertaken. Unlike the first pile, this could not be any trifling affair. Below a certain level, the atomic explosive will not work. But with the smallest basic bomb that could be built mounted on a tower, and with instruments set up to watch it, a group of men moved back cautiously to more-than-seemed-necessary distance. The figures made in advance proved remarkably accurate as to the area of danger.

At the proper time, the bomb was set off, and the first of the mushroom-shaped clouds mounted upwards, while the desert sand under it was fused into a sea of greenish glass.

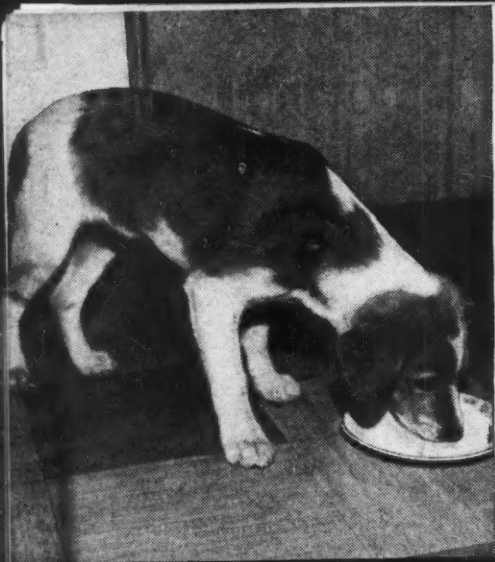
Again, theory had been confirmed. Shortly thereafter, our planes carried the news of this discovery to the world, making the dramatic announcement over Hiroshima on Aug. 6, 1945, 30 to 40 years after our first real beginning of understanding of the relationship of matter and energy.



— Photos: *Friends Magazine*.

PLAYMATES

A child and his dog are pals. Sometimes they even go through the same actions in the routine of their day. It begins with the morning bath for Joey and Skippy.



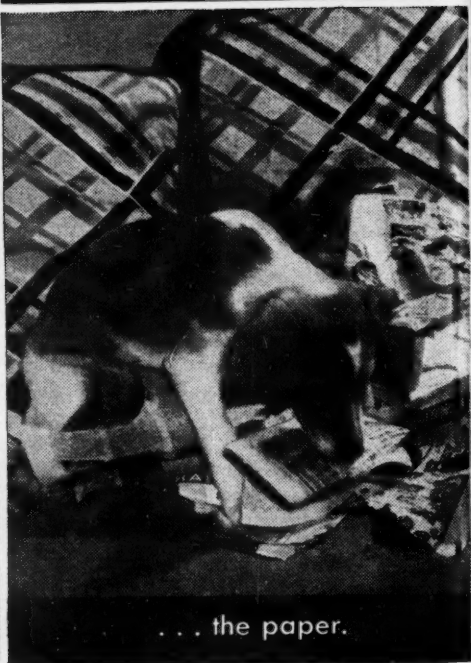
Next, they lap up



... breakfast.



Tear through



... the paper.



Ready for a trip



... in safety.



Back for a game



... of hide and seek.



Daddy's slipper



... both of them.



Up goes Skippy



... and also Joey.



When the day comes to an end, both Joey and Skippy are worn out and ready for their beds and sound, innocent sleep. Busy, lively hours are over for two who are not only playmates, but pals.



Even in India...



I had read almost everything I could lay my hands on in Catholic literature. But still I held out. Although intellectually convinced, my pride would not allow submission to the Church. One day, a friend handed me a bundle of magazines. Among them were some Catholic Digests. I read the general articles first. Then I came to one on the Annunciation, and another on the miracle of Lourdes. I had always quoted, "The heart hath reasons that the head knows naught of," but here, in those issues of the Catholic Digest, I found enough to satisfy both my head and heart. More specially, the snippets were getting me before I had a chance to get my prejudicial heckles up. I am now taking instructions.

R. ZAL
Mount Road
Nagpur, M. P., India

INDIAN OCEAN